10¢ A COPY

The OIL WEEKLY

March 12, 1926 Volume 40. No. 12

the experience of hundreds of operators, contractors and drillers throughout the rotary fields of the World made them standardize on the

HUGHES ROCK BIT

for all rock drilling

HIGHEST QUALITY

ACME

DRILLING AND FISHING TOOLS

Would you go some extra miles for the right fishing tools?

Practically all drillers, drilling contractors and superintendents who have been successful for a considerable time have learned that eliminating the risks increases their gain. Yet even to many of these experienced men it may never have occurred that they should eliminate risky fishing tools with the same caution as they would damaged casing.

The highest quality of steel, the most modern methods of fabricating steel, and the most approved designs of shaping steel are given the first and final consideration in manufacturing Acme Fishing Tools. Even with every care we can exercise we cannot turn out PERFECT implements. They are, however, as nearly perfect as our 25 years experience and modern plant facilities can possibly make them.

When a tool, representing the highest quality we can secure, is made and put in an Acme dealer's stock it is there to be rented but it may be sold instead. We never know.

We make them to rent. And to rent as long as possible. When you buy an Acme Fishing Tool you may be sure it was made primarily for our ownership, and there is a heap of satisfaction in this fact.

Three Chief ACME Characteristics

Quality — of the best; the result of 25 years of Fishing Tool designing, manufacturing and actual operation testing.

Service — Complete Stocks; Accessibly Located with competent wide awake distributors with whom doing business is a pleasure.

Value — Unexcelled on account of economical manufacturing and fair prices scientifically based on the average length of tool life.

ACME FISHING TOOL CO.

Export Office: 136 Liberty St., New York City, N.Y.

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Great Northern Tool and Supply Co.—Kevin, Montana.
Acme Rental Tool Service Co.—Graham, Texas.
Acme Fishing Tool Co. of Texas—Vernon, Texas.
Brown Tool Company—Cross Plains, Texas.
Brown Welding and Machine Co.—Breckenridge, Texas.
Elma Bros. & Co.—Waynesburg, Pa.
Acme Fishing Tool Co.—Tulsa, Oklahoma.
Acme Fishing Tool Co.—Okmulgee, Oklahoma.
Logan Foundry and Machine Co. Logan, Ohio.

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PRECISION

THE failure of equipment to function one hundred per cent in service does not always mean the complete failure of a major part. In many cases the trouble can be traced to small deficiencies that could, with proper care in the plant, have been prevented.

GASO craftsmen are schooled in the principle that a pump is as strong as its weakest part. Precision takes time and costs money but it pays dividends in the form of that Absolute Dependability for which GASO Pumps are known.

Write for our new 64-page catalog.

GASO PUMP & BURNER MFG. CO. · *Tulsa, Okla.*

Suggested by the "Wooden Soldier" scene in Ziegfeld Follies.

GASO PUMPS

for every oil industry need

All parts are perfectly plain and free from pockets where sediment collect. The ground faces of the rotating discs sit tight and clean in a new position with every closing. All parts are interchangeable and either end works equally well against the pressure.

Decreasing the Risk Forty-eight Times

Less production, added replacement expense and shrinking profits are the inevitable result when you trust your oil to inferior valves.

Successful operators know the vital necessity of selecting good valves. That's why they specify Darling Gate Valves—whether for producing, conveying or refining.

In the manifold room of one of the largest producing companies are forty-eight Darlings—each one a positive check against valve risk.

Darling Valves are known wherever valves are used as "the long-lived, dependable valve." Each Darling carries the assurance of easy operation, even wear, tightness and freedom from jamming.

Details of design and construction sent on request.

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International Supply Co. **Petroleum Supply Co.**

California Distributor

Petroleum Equipment Company, Los Angeles

DARLING
GATE VALVES

Say you saw it in The OIL WEEKLY

They've known each other for 30 years/

THEY'RE OLD-TIMERS, both of 'em. They know what the oil fields expect in the way of service from both men and metal, and can give good accounts of themselves for the last 30 years.

Reading, the Genuine Wrought Iron Pipe, has grown up with the industry, and has the respect of every old-established operator, from Pennsylvania to the Pacific. Reading's claim to this distinction lies in the fact that it gives unfailing service for two to three times longer than the best of steel pipe. Reading Genuine Wrought Iron Pipe resists corrosion and crystallization to the limit, and its double welds are stronger than the pipe itself.

No tie-ups, no losses, when your Tubing, Casing and Line Pipe are marked "Reading."

READING IRON COMPANY
Reading, Penna.

World's Largest Makers of Genuine Wrought Iron Pipe

OIL WELL SUPPLY COMPANY, DISTRIBUTORS
Inquire at any of their 100 branches

READING PIPE
GENUINE WROUGHT IRON

Say you saw it in The OIL WEEKLY

TOOL JOINTS

LUCEY

FIVE POINTS
OF SUPERIORITY

LUCEY

TOOL JOINTS ARE MADE OF HIGH GRADE STEEL SELECTED AFTER CAREFUL EXPERIMENTATION TO INSURE UNIFORMITY IN MANUFACTURE AND SERVICE.

LUCEY

TOOL JOINTS ARE CAREFULLY FORGED UNDER CONDITIONS WHICH PRODUCE A UNIFORM STRUCTURE, FREE FROM FORGING IMPERFECTIONS—**AND INSPECTED.**

LUCEY

TOOL JOINTS ARE ACCURATELY MACHINED SO THAT THERE IS ABSOLUTE INTERCHANGEABILITY OF PINS AND BOXES —**AND INSPECTED.**

LUCEY

TOOL JOINTS ARE HEAT-TREATED BY A METHOD WHICH PREVENTS GALLING OF THREADS, BURSTING OF PIPE ENDS AND DEFORMATION —**AND INSPECTED.**

LUCEY

TOOL JOINTS ARE FINALLY INSPECTED FOR HARDNESS, INTERCHANGEABILITY AND DEFECTS AFTER A THOROUGH CLEANSING WHICH WILL DISCLOSE ANY SURFACE IMPERFECTIONS NOT OTHERWISE APPARENT.

DISTRIBUTORS:
Lucey Manufacturing Corporation of Tennessee:
Mid-Continent General Office and Central Warehouse, Tulsa, Okla., with branches at Tonkawa and Healdton, Okla.

LUCEY MANUFACTURING CORPORATION
MAIN OFFICE AND WORKS:
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Bradford Supply Company, Wichita Falls, Texas.
International Supply Company, Garber, Wewoka, Stroud, Okla.

Say you saw it in The OIL WEEKLY

In the days when cigarettes were "coffin nails"

Thirty-two years ago the man who smoked a "pack a day" was committing suicide—"antis" had the time of their lives blaming hell and its friends for this great, great evil—but that was a long time ago—and the world war put the final clamp on it.

Jones Sucker Rods have gone along thirty-two years without a single anti raising a whisper—oil men know they're the best rods, because they prove it when they use them—we know it, because from both a laboratory and manufacturing standpoint none can be better—our aim is always to produce the finest sucker rods—always far better—and they are!

If you don't know them—get acquainted with Jones Forged End Rods—the Giant and Perfect—you'll like them.

The S. M. Jones Company

Toledo, Ohio

Mid-Continent Office: 602 Wright Bldg., Tulsa, Okla.

JONES
SUCKER RODS

"The Largest Manufacturers of Sucker Rods in the World"

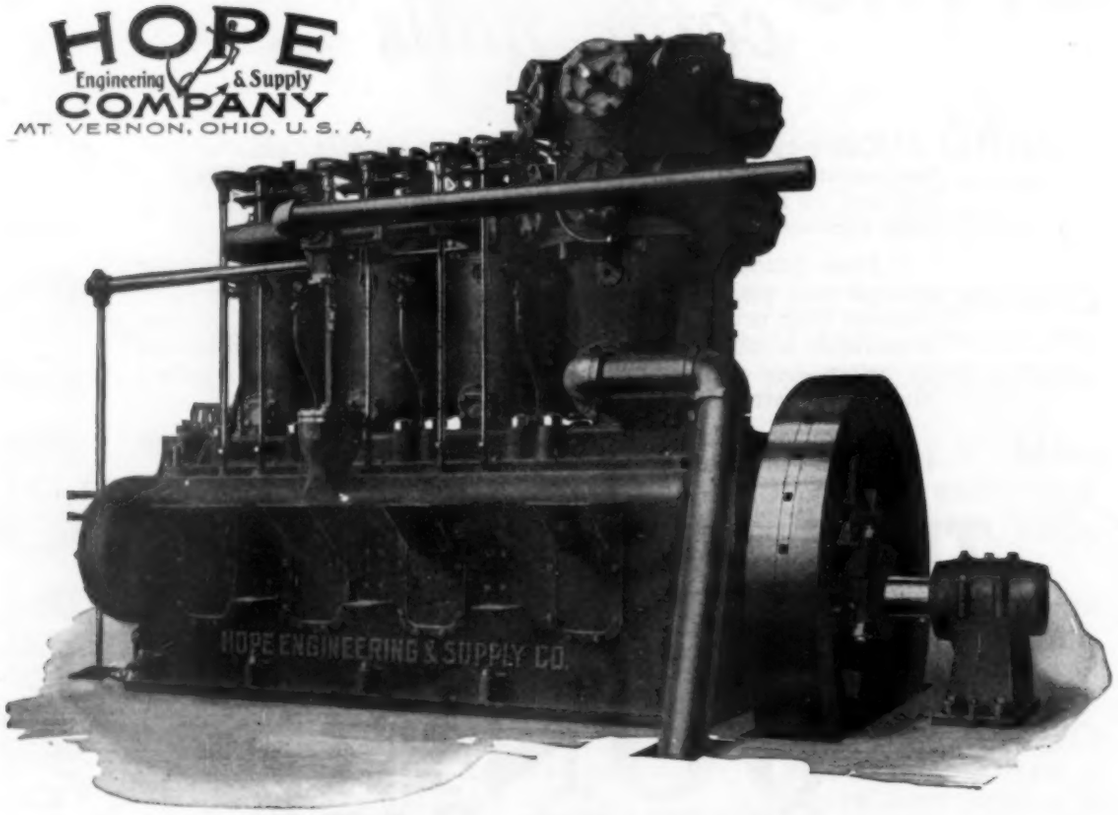
HOPE Vertical Compressors

The Hope Vertical Gas Compressor was in the beginning—and still is—revolutionary. Its radical departure from common practice aroused the skepticism of those in whom habit had bred an unfaltering faith in the super-virtue of the horizontal type.

But facts are inescapeable. And one big, outstanding fact that gas engineers must face is this—the Hope Vertical Gas Compressor today represents the most advanced practice, with records of performance growing more and more convincing with the passing of months and years.

Let us send you the specifications.

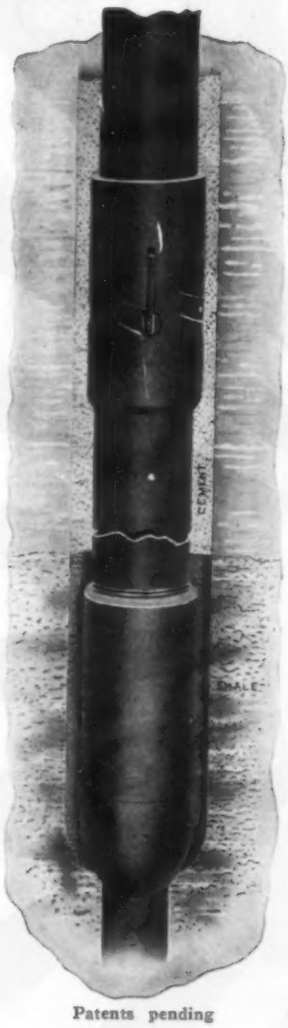
HOPE Engineering & Supply COMPANY
MT. VERNON, OHIO, U. S. A.



HOPE **ENGINEERS & CONTRACTORS IN NATURAL GAS AND OIL** HOPE

Say you saw it in The OIL WEEKLY

CEMENTING
Without Chances



Patents pending

Outside vew

Mak-Shur CEMENT BARREL

Lorraine Built

That's what the big boss wants; can't have a failure nor delayed production. If such happens, it's trouble for everybody. Here's what you can do with the "Mak-Shur" Cement Barrel in your string:

1 *Set the cement at any point in the well with positive success, less effort, no delay and minimum cost.*

2 *Set casing at bottom of hole without weight on slips.*

3 *Establish circulation without moving the casing.*

4 *Get perfect distribution of cement entirely around casing.*

5 *Have faultless centering with equal space on all sides.*

6 *Prevent cement from "backing-up" in casing under all conditions.*

7 *Eliminate danger of parting.*

Sizes 4½" to 12½". New catalog on request.

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Tulsa, Oklahoma.

Export Distributors:
Buck & Stoddard
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38 Years of Meter Making and Now

The New Metco POSITIVE Meter

for LARGE VOLUME Gas Measurement

METERS

METERS

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METRIC METAL WORKS

of the American Meter Company, Inc.

ERIE, PENNSYLVANIA - U-S-A-

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It is absolutely dependable and fool-proof.

Once adjusted it requires no further attention.

Maintains uniform pressure on entire battery.

And the crude reaches the P. L. without loss of gas or gravity.

These seamless welded separators, made of heavy copper-steel sheets, are the last word in separator quality and efficiency.

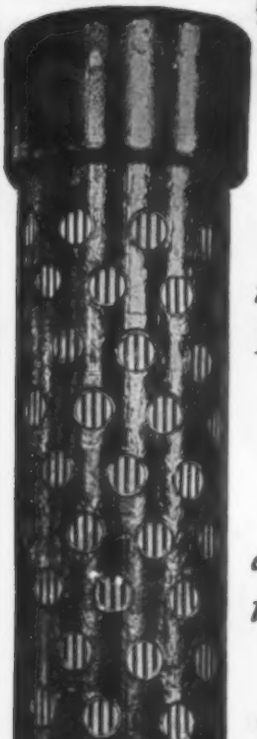
Write for descriptive literature

M & V TANK COMPANY

WICHITA FALLS, TEXAS

Branches at

OLNEY, VERNON, NOCONA, CROSS PLAINS



"McEvoy Wireless" Well Strainer

is being specially constructed for the conditions of PRODUCING strata of the

Urania, Louisiana field.

It will be to the immediate advantage of all operators in the above locality to acquaint themselves with this special type of "McEvoy Wireless."

Please request us to have our representative call

J. H. McEVOY & COMPANY

LONDON
O. F. SUNDT, Petroleum Geologist and Engineer
90 Abingdon Road W 8

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[DUNN TOOLAGRAM]

DUNN SAFETY ROTARY TONGS

OIL WELL DUNN TOOLS

"The Symbol of Safety in Oil Field Practice"

(Patented)

NO BUSHINGS!

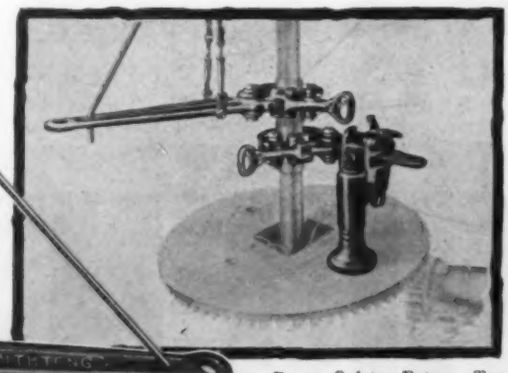
Built especially for speed in rotary drilling, without sacrificing the usual high factor of Dunn Safety in operation.

Scientifically designed, having two jaws that INTERLOCK and co-act with the movement of the handle in gripping the pipe, AUTOMATICALLY ADJUSTING TO TAKE PIPE, COLLAR AND TOOL JOINT WITHOUT BUSHINGS.

Lightning-fast in operation. Super strong. Perfect, positive grip. Cannot slip. Cannot damage the pipe. Unusually simple, by reason of but few parts, and therefore maintained at a minimum expense.

Built in two types, as illustrated, for all sizes from 2-inch to 8-inch. Write for descriptive folder and prices.

NO BUSHINGS



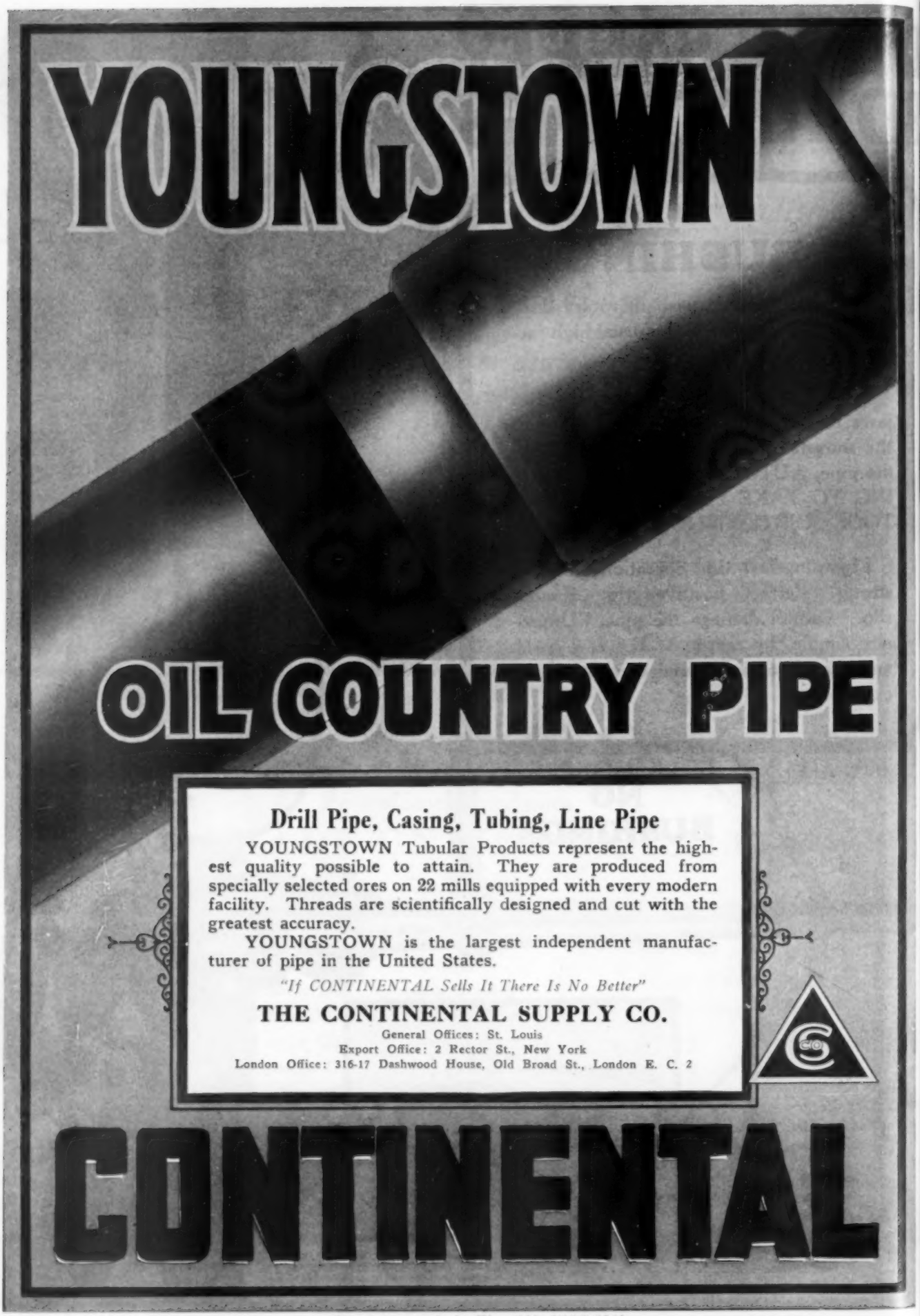
unn Safety Rotary ongs (Suspension Type)

Dunn Safety Rotary Tongs, Suspension and Table Types as used in combination where it is the practice to break out with the rotary.

Dunn Safety Rotary Tongs, (Suspension Type)

DUNN MANUFACTURING COMPANY

OFFICE AND WORKS: OXNARD, CALIFORNIA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OIL COUNTRY PIPE
Drill Pipe, Casing, Tubing, Line Pipe
YOUNGSTOWN Tubular Products represent the highest quality possible to attain. They are produced from specially selected ores on 22 mills equipped with every modern facility. Threads are scientifically designed and cut with the greatest accuracy.
YOUNGSTOWN is the largest independent manufacturer of pipe in the United States.
"If CONTINENTAL Sells It There Is No Better"
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CONTINENTAL

Say you saw it in The OIL WEEKLY

Every Layne Product holds a distinct position of Leadership in its particular field

Because of scientifically correct design

accurate and efficient methods of manufacture

Highest Grade Materials and SERVICE

LAYNE
Keystone Wire Wrapped SCREEN

Write for Screen Literature

LAYNE

A few Points about

THE LAYNE

Keystone WIRE SCREEN

Point 1—
Pipe slightly recessed, wire wrapped in recess and sweated to pipe, forming a solid collar on both ends.

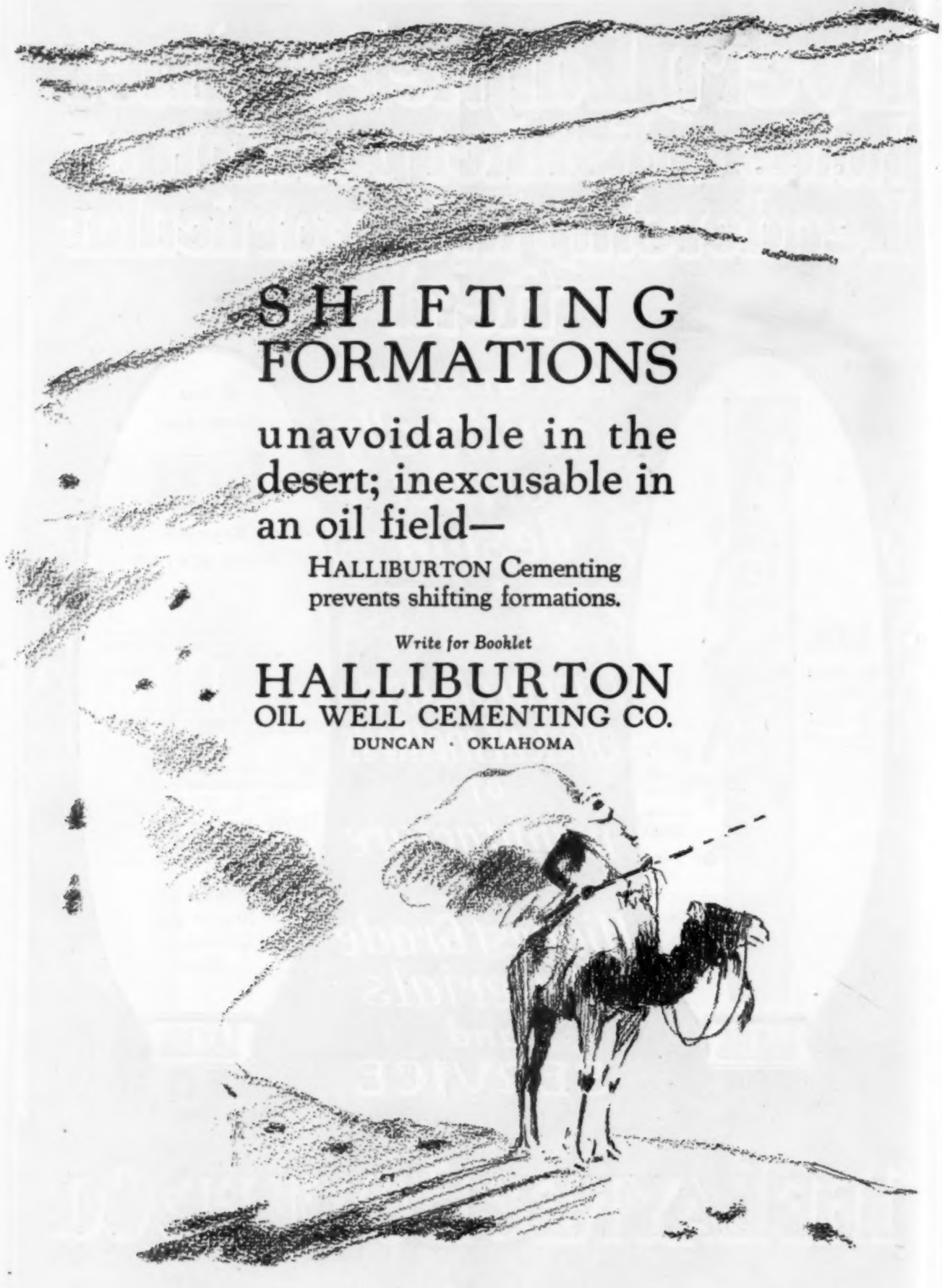
Point 2—
Keystone wire, accurately wound on pipe by our patented winding machine.

Point 3—
Lugs accurately sized and placed in vertical alignment under heavy side pressure; This insures accurate spacing between the wires and prevents displacement of the wire on the perforated pipe.

Made in Bronze and Galvanized Wire

LAYNE

THE LAYNE & BOWLER CO.



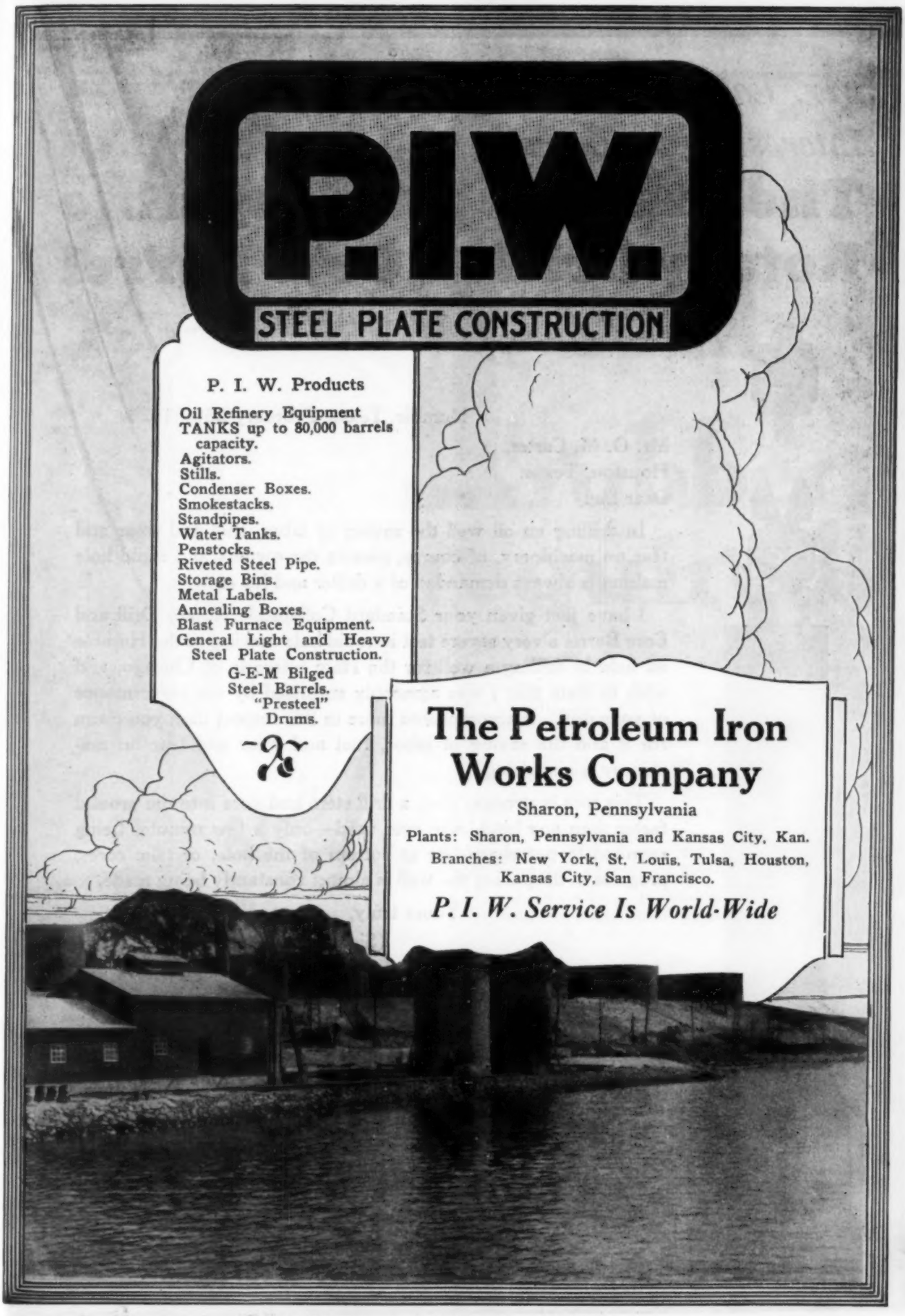
SHIFTING FORMATIONS

unavoidable in the desert; inexcusable in an oil field—

HALLIBURTON Cementing prevents shifting formations.

Write for Booklet

HALLIBURTON
OIL WELL CEMENTING CO.
DUNCAN · OKLAHOMA



Say you saw it in The OIL WEEKLY

Mr. Layton writes an interesting testimonial for

The Standard Collapsible Rotary Drill and Core Barrel

Humble, Texas, February 25th, 1926.

Mr. O. M. Carter,
Houston, Texas.
Dear Sir:

In drilling an oil well the saving of labor, fuel and wear and tear on machinery, of course, pleases the owners, but rapid hole making is always demanded of a driller and his crew.

I have just given your Standard Collapsible Rotary Drill and Core Barrel a very severe test in rapid hole making in the Humble oil field in drilling a well for the Ham interests of Chicago, and wish to state that I was agreeably surprised by the performance of your drill. It accomplishes more in this respect than you claim for it and the saving of labor, fuel and wear and tear on machinery is surprising.

This tool is stronger than a drill stem and goes into the ground faster than any bit I have ever used—only a few minutes being required to put sharp bits at bottom of the hole, or take cores, progress in deepening the well is almost constantly being made.

Yours truly,
(Signed) R. (Bob) M. Layton.
Driller.

This is only one of numerous like testimonials on file in this office.

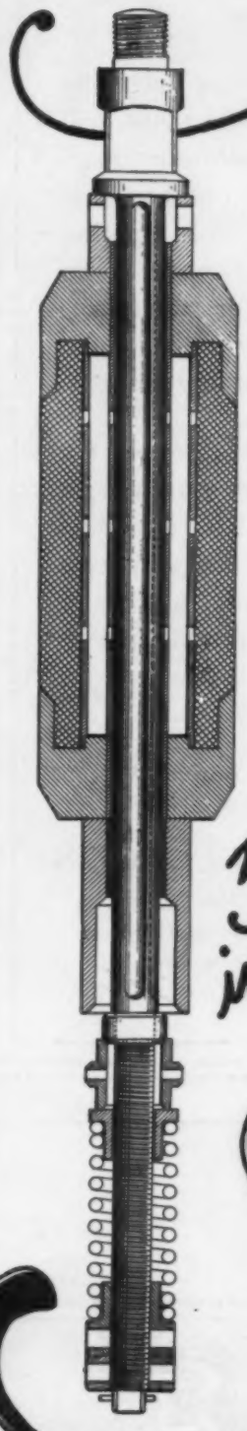
Write for Descriptive Literature Today

O. M. CARTER

W. T. HILTPOLD, Sales Agent
206-7-8 Scanlan Bldg., HOUSTON, TEXAS

Only 1 rubber required

Fully Patented



3 tools in one!

Swabbing ordinarily is an expensive job but with the new Simplex Super-Swab you can positively reduce swabbing costs at least 50%. In the old type of swab it is necessary to use 2 or 3 rubbers—an expense that costs hundreds of dollars per month for many oil producers. In the Simplex a single rubber is used and it does the work BETTER at a fraction of the cost. This rubber cannot freeze or tear out. It is fabricated with flake graphite, is scientifically reinforced and the outer body is moulded over a firm, fibrous core that makes it more resilient and of greatest tensile strength.

Try one and you'll use this Swab forever. Any supply house can furnish the Simplex. Write for literature.

Simplex Equipment Co.

629 S. Spring St., Los Angeles, Calif.

Simplex Super-Swab

A Variety for Every Need

Will not injure Pipes or Tanks

Interior walls of your pipe lines and storage tanks will be found absolutely unaffected by the continued use of Tret-O-Lite over a period of years. It contains no mineral acid or other corrosive ingredient that could injure metal in any way.

TRET-O-LITE offers the simplest, most economical, most THOROUGH method of recovering the petroleum from "cut oil" and tank bottoms. Representatives in every field, at your service without obligation.

Process Patented

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St. Louis, Mo.
Offices and Plant: Webster Groves,
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Tret-O-lite
Reg. U. S. Pat. Off.

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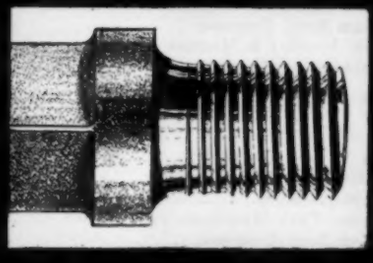
THERE IS NO ECONOMICAL SUBSTITUTE FOR QUALITY



Axelson Machine Company

General Office and Western Factory: Corner Boyle Avenue and Randolph St., Los Angeles, Calif. P. O. Box 337

Eastern Sucker Rod Factory: 3844 Walsh Street, St. Louis, Mo.

Mid-Continent Office: 1023 Kennedy Building, Tulsa, Oklahoma

Mid-Continent Distributors: Frick-Reid Supply Co.

Eastern Distributors: Frick & Lindsay Co.

Casper, Wyoming Office: with Frick-Reid Supply Co.

New York Office: 30 Church Street

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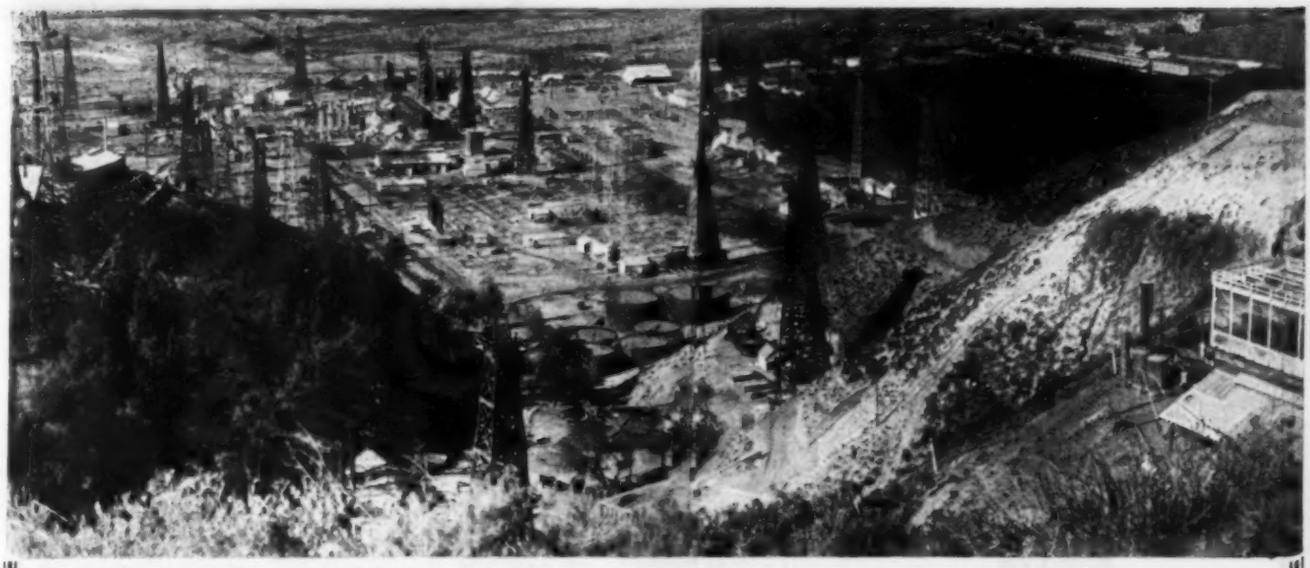

The Ventura Avenue field in California is an example of orderly development and is proving to be one of the best producing areas in the state. At the present time the extent of the field has not been determined.

The OIL WEEKLY

March 12, 1926 **Volume 40, Number 12**

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INTERNATIONAL STEEL IDECO DERRICKS (GALVANIZED)

Aggressiveness of Purchasers Evidence of Crude Strength

By Kent Ridley,
Staff Representative

EXCEPT for slightly further weakness in the gasoline market and some isolated crude price reductions in the East, the market situation remained unchanged over the week. A slight decrease in the daily average production shows that the increase of the week previous was not the beginning of an upward trend in production. Details of the price changes and production figures will be found on other pages of this issue.

The refined oil situation is making it still more uncomfortable for the refiners. Refiners are wondering how the domestic trade can continue in business with the gasoline the jobbers are buying, while the exporters whose activities of late weeks have served to keep hope alive, are idle. Fuel oil is some better in North Texas, the price quoted at $1.30-$1.35, as against the top price of $1.27½ of a week ago.

Except for premiums being held to a maximum of 10 cents per barrel, this unfavorable condition in the refined market is not reflected in the crude market in the Mid-Continent section. On the contrary, larger buyers are very aggressive in securing assurance of future light oil supply, and pipe line extensions are being made to insure them.

This condition of premium paying not growing must not be interpreted as indicating anyting other than a minor weakness. Nothing in the Mid-Continent points toward lower crude oil prices.

The crude marke is steady. Until conditions change, no advances can be expected. With the refined market sagging, the prospect for a higher crude schedule is not bright.

Draft on crude stocks, however, continues at a rate comparable with the past year. The drain is steady, with no indication of lessening.

The narrow margin on which independent owners of plants are now operating has necessitated a gradual curtailment of crude purchases, and bonuses for spot oil have been reduced to an even level with current premiums on daily runs on contract and open division orders. In the North Texas district, which is a favorable barometer of refined market conditions in the Mid-Continent, the most popular grades of spot crude is available in quantity at ten cent premiums, being the same as that paid by refiners for daily runs. Such a premium is all the load a refiner can bear above the posted price of crude until gasoline and other refined products develop more strength in price and demand.

The Joseph Seep Agency gives the following terse explanation of the recent reduction in prices on certain Eastern grades, in a telegram addressed to the Editor of The Oil Weekly:

"Reason for reducing Pennsylvania grade crude is that refiners say they cannot afford to pay the price without losing money, therefore they have stopped buying almost entirely."

Seek Connections

The major buyers of crude have apparently not been affected by the seasonal dullness of the gasoline market, and are casting about for big crude contracts along with usual small lease connections. Such is particularly true in Texas, where developments during the past week were unusually active. The Kay County Gas Company, subsidiary of the Marland Oil Company, contracted with the Dixon Creek Oil Company of Amarillo for 1,500,000 barrels of Panhandle district crude at the former company's posted price as deliveries are made from day to day. The Kay County Gas Company is to receive a minimum of one-half of the current production of the Dixon Creek Oil Company until the contract is fulfilled, and in the meantime funds are to be advanced to the producing company to carry out the development of its proven leases in Hutchinson County. The Kay County Gas Company has been a buyer of Panhandle district crude since last November, and this deal will fortify its position in the field as a crude buyer.

Humble Pipe Line Company is taking necessary steps to increase the capacity of its eight-inch trunk line from Kempner station, near the Big Lake field, Reagan County, to Comyn Junction, by adding 129 miles of eight-inch pipe loops. The present capacity of this line, which is carrying a maximum load, is 20,000 barrels daily, and the loops with added station equipment will bring the capacity up to 30,000 barrels daily. Growing production in Crockett, Upton and Crane Counties and the comparatively steady output of the Big Lake field is responsible for Humble's actions in providing greater line capacity out of West Texas. Such a move enables Humble to control the crude situation in West Texas until a field of major proportions is developed, as none of the other major pipe line companies can afford to build to West Texas unless full line capacity can be assured.

Congressman Asks Oil Export Embargo

Washington, D. C.—Congress has been asked by Representative Howard, of Nebraska, to place an embargo on exports of crude oil and gasoline for a period of one year. In a resolution the Nebraska congressman states that it is apparent that the production and distribution of gasoline in the United States is controlled by a combination of interests and that consumers of gasoline, by reason of such combination and control, are compelled to pay an exorbitant price for that product. The increasing export of gasoline from the United States, he contends, is impairing the domestic supply to the danger point, threatening further increase in the price to the domestic trade.

Because of the conditions of which he complains, Mr. Howard seeks to prevent on and after 10 days following the passage of his measure and until the expiration of a period of one year, the exportation from the United States of any crude oil for refining outside the United States, or any gasoline. He would have the Secretary of the Treasury authorized to prescribe such regulations as may be necessary for enforcing the provisions of the proposed law.

Any gasoline or crude oil destined for exportation in violation of the Howard measure, if adopted, would be subject to seizure and forfeiture in the same manner and upon the same conditions as merchandise brought into the United States in violation of the customs laws. Any person or group of persons found guilty of violations, would be subject to a fine of not less than $1000, not more than $100,000, imprisonment of from one to five years, or both such fine and imprisonment.

Tulsa, Okla.—Prairie Oil and Gas Company has bought the Olean Petroleum Company for a reported consideration of $7,000,000. The properties include 800 barrels of Oklahoma production, acreage and two drilling wells in New Mexico.

Operators Reduce Footage Prices Paid for Panhandle Drilling

Combination rig expected to replace cabletool method as result of lower prices

By H. H. King
Staff Representative

Amarillo, Texas.—A substantial cut in the price scale being paid by the leading operators in the Carson-Hutchinson County field to drilling contractors in making hole on a footage basis was announced during the past week. Drilling contractors have been receiving from $5 to $6 per foot in drilling the wells to the usual pay level at 3000 feet, and the new prices going into effect will vary from $4 to $5.50 per foot, while one of the most active companies in Hutchinson County is reported to have fixed a minimum price of $3.50 per foot on future contracts covering inside drilling in the south half of Hutchinson County. The majority of the individual operators and independent companies have announced that a flat price of $5 per foot will be paid on future drilling contracts. This price has been adopted by the McIlroy-Dixon Creek and allied interests, who are starting more than a dozen new tests on their proven leases on the Smith and Kingsland ranches.

The use of the combination rig is expected to follow the cut in drilling prices, as the rotary can be used fairly successfully to the top of the lime and usual gas horizon around the 2100-foot level with greater speed and less casing, but the rotary must be replaced by cable tools in drilling through the lime and heavy gas pay and into the oil horizon. Troublesome quicksand encountered from 300 to 700 feet in many of the tests drilled with cable tools has been easily overcome with rotary equipment. The so-called lime, or anhydrite, can be negotiated with rotary, but considerable difficulty is experienced with frozen pipe. The use of the rotary for drilling in an oil well has been found impractical, since the low rock pressure, which averages 450 pounds for the field, results in the rotary mud sealing off the oil pay. Several failures in the virtually proven section of the Carson-Hutchinson County field resulted from the use of the rotary in drilling in before operators learned that the rotary was not satisfactory in completing a well.

Owing to the disadvantage in moving in and maintaining contact with supply stores and field shops, the operators on the north side of the Canadian River in Hutchinson County will pay drilling contractors slightly higher prices. The Gulf-Panhandle & Cline Interests are starting five tests north of the Canadian, and a half dozen other tests are getting under way on a basis of $5.50 per foot. Very little trouble is experienced with quicksand and a heavy gas in the lime on the north side of the Canadian, but the remoteness of this area from the supplies and repair shops more than equalizes the advantages to be had in drilling. The river has not been bridged near the oil field, and it is fordable only during the dry seasons, even then heavy trucks have trouble in negotiating the loose sand.

To Build Rail Line

Convenient railroad service to the Hutchinson County field is promised by the Panhandle & Santa Fe Railroad, which has made survey and filed application with the I. C. C. to build a 30-mile extension from the town of Panhandle, Carson County, taking a northerly course directly through the main oil field to the river. The building of this line is practically assured, but the development of the field will be well underway before it can be completed.

Hutchinson County continues to swell the field will be well underway before it gregate of 106 drilling tests, rigs and derricks, and locations late last week. Of this number 53 were in process of drilling; eight shut down for storage, titles, etc.; 35 rigs and derricks; and 10 locations for immediate tests. Allowing an average cost of $40,000 per completed well, the amount of money being spent in the county alone for development has reached a staggering figure. Although $40,000 is accepted as an average cost at present, this will be gradually reduced to slightly under $35,000 per well, as the drilling is speeded up. The McIlroy-Herring well on the Smith ranch was completed last week for $29,000, according to S. D. McIlroy, but exceptional good luck was had in drilling, which was done under the supervision of C. E. Moore, field superintendent.

The Marland Pipe Line Company has purchased right-of-way to build an eight-inch line from lower Hutchinson County via the Carson County production on the Burnett ranch to the town of Panhandle. This company's line will not interfere with the pipe line working agreement now in operation between the Kay County Gas Company, Marland subsidiary, and the Plains Pipe Line Company. Marland has contracted for 1,500,000 barrels of Panhandle crude from the Dixon Creek-McIlroy Interests, at the former company's posted price as in effect from day to day. Marland has advanced money to the above parties to proceed with their big development program, and will receive a minimum of one-half of the daily production until the crude contract is fulfilled.

Details regarding Gulf's lease consolidation with Walter Cline and the Panhandle Refining Company on five ranches in Hutchinson County, and proposed direct pipe line outlet for the field to Ranger, thence to the Gulf Coast, were announced last week. Actual work on Gulf's proposed pipe line will not begin for some time, as right-of-way has not yet been purchased.

700 Barrel Well

Phillips Petroleum Company & Pulaski Oil Company's Wright-Smith 2, section 5, flowed 335 barrels natural during the first 12 hours after shot of 120 quarts in sandy-lime pay 2931-79 feet, total depth 2986 feet, and is rated as a 700 barrel producer when properly cleaned out. Phillips Petroleum Company bought the Canyon Oil Company's two forty-acre tracts, being the NW SW of section 12, and the SE SE of section 13, with one test at 2750 feet, and a second one at 2335 feet, for a consideration of $125,000, part cash and remainder in oil. This purchase helps to make Phillips' holdings more solid in the vicinity of its Hutchinson County gasoline plant site.

Big Lake Well Flows 200 Barrels an Hour

San Angelo, Texas.—The development of crude production in commercial quantities in Crockett, Upton and Crane Counties lately and continued steady output of the Big Lake field has resulted in a decision being made by Humble Pipe Line Company officials to increase the capacity of its West Texas trunk line from Kempner station, near Big Lake field, to Comyn Junction to 30,000 barrels daily. This line, which is eight-inch pipe and 190 miles in length, with four main line pump stations is now handling a maximum of 20,000 barrels daily from the Big Lake field alone. Four loops, amounting to a total of 130 miles of eight-inch pipe, will be constructed as soon as the pipe arrives from the mills, and a 160 H. P. pumping unit will be added to each station. The longest loop will be 52 miles in length, and will extend west from San Angelo station towards Big Lake. A 27-mile loop will go into the Ballinger station; 30 mile loop into the May station (Brown County); and a 20 mile loop into Humble's Central West Texas pipe line terminal at Comyn Junction.

Pipe lines will be constructed shortly to connect the World pool, Crockett

County, with Humble's main line at Kempner, a distance of about 15 miles, while an extension is also to be built west into the Upton-Crane County field, a distance of about 35 miles. The Reagan County Purchasing Company, Marland subsidiary, is erecting small tankage to care for storage in the three counties until pipe lines are available. It is expected that the Reagan County Purchasing Company will turn this production over to Humble on the same basis as now being carried out on the Big Lake field production, which Humble is obtaining through the former concern. However the gravity of the crude in Crockett, Upton and Crane Counties ranges from 27 to 34 degrees, while Big Lake crude averages 38.6 gravity.

Good Big Lake Well

An unusually good producer was completed early this week by the Big Lake Oil Company's University 58, C SE SW NE section 1, block 2, with an estimated initial flow of 200 barrels of pipe line oil per hour after drilling 51 feet of sandy-lime pay to a total depth of 2196 feet. The bottom of the hole is 232 feet below sea level. The same company's University 37-A flowed 700 barrels natural from shallow sand at 2428-30 feet. Big Lake Oil Company is doubling the capacity of its natural gasoline plant.

An even dozen new locations were staked last week in Crockett and Upton Counties by Humble, Marland, Gulf and J. K. Hughes. Humble and Marland, who are operating in the World pool, Crockett County, on a 50-50 basis, made five new locations on the L. P. Powell ranch near production. J. K. Hughes made one location. Marland Oil Company made three locations on the Burleson land, section 100, near the original Hurdle district producer in Upton County; one on the Benton Land Company fee, Julia Prater survey, near the Crane County line; and a second one on the Sanger Brothers land. Gulf has made location to test a large block of leases on the McIlroy ranch in section 203, near the Crane-Upton County line, and Bill Dunning has the drilling contract.

Independent Oil & Gas Company and Turman-Maxwell's wildcat producer on the Len Taylor land, Sapp survey, near the Crane-Upton County line, continues to flow 125 barrels daily in a single head from sandy-lime pay at 2038-40 feet. This well is to be drilled in probably before the end of the week, and is expected to develop a steady flow, as it has considerable more gas along with the oil than any well completed to date outside of the Big Lake field in West Texas. The production has been contracted for by the Reagan County Purchasing Company on a basis of Mid-Continent gravity prices at the well. However, the gravity of the oil is slightly below 30 degrees. Dixie Oil Company's Burleson 1, located near the Baker discovery well in the Hurdle district, Upton County, is pumping about 30 barrels daily after shot in sandy-lime 2185-2230 feet, and is reported to be pumping off in about eight hours.

Lufkin Resigns as Texas Company Head

THE oil industry learns with regret of the retirement from active service of E. C. Lufkin, who for nearly 17 years has been one of the dominant figures in The Texas Company which means one of the dominant characters in the petroleum industry.

The announcement that Mr. Lufkin, chairman of the board of The Texas Company, had resigned and was retiring to private life because of ill health, came March 9th. For more than a year Mr. Lufkin's health has been bad and close friends anticipated his retirement due to this reason. He will continue as a director of the company.

Mr. Lufkin was born in Massachusetts, February 5th, 1864, but spent his early life in a petroleum atmosphere—Titusville, Pa. He graduated from the Titusville High School in 1881, later graduated from the Boston School of Technology, had practical experience in the oil business before he became connected with the Snow Steam Pump Works.

Mr. Lufkin came with The Texas Company in 1909 from the Snow Steam Pump Works of Buffalo of which organization he was vice-president and general manager. In 1910 he was elected vice-president of The Texas Company and in 1913 succeeded J. S. Cullinan as president. He was made chairman of the board and chairman of the executive committee in 1921, being the first man to occupy the position of chairman of the board of The Texas Company.

During the years of the Great War Mr. Lufkin was the guiding hand at the helm of The Texas Company and his contribution to his country as a member of the Petroleum War Service Board (of which he was vice-chairman) merited the appreciation it received at the time.

He has seen and had part in the tremendous growth of The Texas Company during a period when the capital stock was increased by steady strides from $30,000,000 to $164,450,000. He has had a part in the development of producing areas which, when he first came with The Texas Company were not even considered potential.

E. C. LUFKIN

All through his connection with The Texas Company Mr. Lufkin was noted for his tact in his dealings with those people who were helping to make The Texas Company, and his fine gentlemanly qualities.

Humble Buys Producing Lease in Brown County

Ranger, Texas.—Humble Oil & Refining Company has purchased the shallow oil and gas lease recently proven for production by Barney Carter, Cowboy Evans et al in North Brown County for a consideration of $300,000, of which $200,000 was cash and the remainder in oil. This lease is located on the Dunn tract, Juan Delgado survey, and consists of 36 acres with one well making 160 barrels, and a late completion flowing 340 barrels from the regular 1100-foot Strawn sand. Humble discovered this pool last year, and is one of the major lease owners. More than a dozen tests are now underway in the field. Humble is erecting a natural gasoline plant in the field in anticipation of having a large volume of rich gas from tests now drilling near the pay level.

Skelly Oil Company is erecting a natural gasoline plant in the Gwinnupp pool, Coleman County, where one oil and gas producer has been completed, and several tests are nearing the pay level. Morrison & St. John's second tests on the Young land is making several million feet gas and salt water from sand at 1651-60 feet. J. S. Cosden et al's wildcat test on the Williams land, located southeast of the Cross Cut field, Brown County is running casing to test a good show of oil in sand pay at 1140 feet.

New Work in Oklahoma Greatest In Many Weeks

Tulsa, Oklahoma.—Continued activity in starting new drilling operations in numerous promising areas is still the feature of the situation in Oklahoma. Reports show 141 new tests were begun during the past week in Oklahoma fields and wildcat districts.

This is the greatest number of new wells started during any week this year or the latter part of last year. Creek and Stephens Counties reported the greatest number of new tests starting with 19 each.

While the work in Creek County is confined very largely to proven and semi-proven areas, wildcatting is characteristic of Stephen County to the south.

Locations have been staked for two new wildcat tests in the Kilgore district of Stephens County, the Jefferson 1, in the southeast of the northeast of 31-2n-4w, and the Gray 1 in the southeast of the northeast of 6-1n-4w.

The entire southern area of Oklahoma is gaining in impetus of exploration work. Carter County had 11 new wells starting and Jefferson County eight. Caddo, Cotton and Comanche Counties also contributed to the new work.

Interest in Carter County development is centered on Marrick and Associate's Noble 1, NW NE 27-2s-2w, which has casing cemented on sand topped at 1,080 feet that had a good core barrel showing of oil.

Old Districts Come Back

The older oil districts of Oklahoma are apparently staging a comeback. The old Cleveland field which is almost ancient history to operators and the Mounds district, also an "old timer" are having completions running as high as 200 barrels with 50 and 60 barrels not at all unusual.

The Hunton lime may yield production in the Davenport field of central Lincoln County. The Magnolia Petroleum Company had shows of oil and gas between 4310 and 4320 feet in their School land well No. 1, NEc NW 16-14-5e. It is now drilling at 4,338 feet and is believed to be in the Hunton lime.

If the Hunton lime yields commercial production a future will be offered the present Prue sand wells when they decline. Davenport field production during the past week was 23,221 barrels and is from 154 wells, an increase of 2,258 barrels and a gain of 10 new wells.

Steady increase in the production of the Morgan, Flynn and Wrightsman well in the northeast of the southeast of 10-9-5, near Earlsboro, gives it the indications of being a pool opener in western Seminole County and eastern Pottawatomie County.

The first oil in the test was had at 3,560 feet with a 50-barrel flow. Deepened three feet it increased to 150 barrels and after being shot made 200 barrels. Daily production since has been around 215 barrels.

The producing sand is variously called the Prue and the Gilcrease. Four offsets are being made by The Texas Company, Waite Phillips, Gypsy and Independent.

Coastal Crude Change

Effective Wednesday morning, March 10, the Humble Oil and Refining Company posted the following revision in prices for Coastal crude:

"B" crude which includes all oil not meeting "A" grade requirements at Goose Creek, Hull, Liberty, West Columbia, Orange, Pierce Junction will be bought at the following prices:

Below 25 gravity	**$1.25**
25 to 25.9 gravity	**1.30**
26 to 26.9 gravity	**1.35**
27 to 27.9 gravity	**1.40**
28 to 28.9 gravity	**1.45**
29 to 29.9 gravity	**1.50**
30 and above	**1.55**

No change was made in the posted price of $1.50 for "A" crude.

A slight change in "A" grade specifications has been announced by the Humble company.

"A" grade oil now includes all crudes conforming to the following tests: Viscosity, not less than 100 seconds at 100 degrees F. Saybolt; Sulphur, not over 4 per cent; Baume gravity, not over 25 at 60 degrees F.; Cold Test, of distillates having viscosity of 1000 seconds at 100 degrees F. shall not be over 5 degrees F.

Failure at Boling Determining Location Of Favorable Tracts

By Wallace Davis
Staff Representative

Houston, Texas.—The abandoning of the Chase No. 1, located more than 3000 feet to the southeast of The Texas Company's discovery well at Boling, Tuesday at 2703 feet in anhydrite, apparently eliminates the Gulf Production Company from active operating at Boling and clouds its chances of being in the play of this prospective big field except for the half interest held in the 124-acre E. Hawes tract with the Humble Oil and Refining Company.

The Chase 1 spudded January 25 at a location 50 feet from the south line of the E. M. Chase 50 acres adjoining Vacuum Oil Company's 50-acre tract in the southeast corner of the S. T. Taylor 400 acres held by The Texas Company. This test was the Gulf's best chance at production, it being pected. Other indications brought up during the past week such as the striking of salt and gyp in the Atlantic's most likely off the salt of any of the large blocks of acreage held by the company on the dome. At between 2550 feet and 2600 a sandy lime showing some oil was penetrated after a change from dome formation below 1700 feet. The test cored anhydrite at 2696 feet.

The Chase 1 plays a big part in determining the trend of Boling dome, and indicates that the edge of the salt must run in almost a direct line to a point slightly to the east of Boling's present production. The salt found at 1778 feet in the Oxford's No. 1 Rogers shows that the dome stands out further to the west than was first ex- No. 3 at 2975 feet in the extreme west corner of this company's 20-acre tract northwest of the discovery well. Atlantic is preparing to plug back to a sand found at 2927 feet and test.

Due to recent developments showing the salt to turn so far to the west several locations have been holding up pending the outcome of other wells. The Texas Company's Floyd 1, located early in January, has been ready to rig for three weeks. The location is without doubt on the salt, it being almost in a direct line with the Gulf's Chase 1 and Oxford's Floyd 1. In the event the Atlantic fails to make a producer of its No. 3 the Floyd 1 location could not be off the salt.

There Are No Unimportant Details About Fish Tail Bits

Improvement in field handling required to secure full efficiency provided by steel maker

By Harry Pennington
Mechanical Engineer

IN the manufacture, fabrication and use of tool steel, from the ore, through the furnace, rolling mill, bit shop, on down to the bottom of the hole, there are no unimportant details. Each step, within itself, in all of the operations involved, can mar a good steel, whether in the making of the steel, in the making of the bit, or in the dressing of a dull bit.

In the light of what we know about steels today, we must grant that the steel maker can make good steel and, while we can hardly grant a claim that a steel is "the best on earth," it may safely be granted that a steel put out by a reliable maker is good.

The writer fully believes that American steels can be made better than any, but there is more to steel than the making, and if a steel meets with too much sales resistance, for any reason, then that steel is not a commercial steel, although frequently, if such a steel were handled correctly in the field, there would be no sales resistance.

For, not only has the American manufacturer of steel been compelled to work out his own ways of making steel, but he is also compelled to follow his steel to the field and do his best to have that steel given treatment commensurate with that preceding.

Hence, steels used for fish tail bits in the field today are such that the trade requires and the writer here makes the assertion that steels used for making fishtails at the present time are a compromise between that which the manufacturer would like to furnish, and the user would like to have, and that which the user is compelled to buy because of the average conditions, and methods commonly used in dressing bits in the field.

Handling of Tool Steel

When one accustomed to correct methods of handling tool steels of the finer grades, takes an overhead view of the great mechanical accomplishments of American industry, and finds that users of tool steel in other basic industries in quantities comparable to that used in the oil producing industry of the oil industry, the difference in methods is immediately discovered. Other industries, including the machine tool, automotive, steel businesses have found that the most modern, accurate and exact conditions and methods of handling tool steel have proven far and away the most economical, even with steels as high as $2.00 per pound.

And then, going to a busy oil field in the drilling stage, and taking just one look in a field bit shop at the means and methods for handling the real business end of a drilling rig—the cutting edge of the fish tail bit—the exclamation, foolish, is readily justifiable.

For, even though the operator and the drilling contractor may possess the most intense desire to better all his methods and reduce them to technical accuracy as far as possible, the fish tail bit is surrounded by field customs that make it one of, if not the most, difficult mechanical problems to cover with any degree of satisfaction.

In the first place, there is no standard of measurement of the durable cutting qualities of cutting edges for fish tail bits. The bit is always operated out of sight in formations not visible and that cannot be gauged in place as to every quality, and there is no human possibility of ever setting up a gauge of comparative performance of a bit in the hole, for the material being cut it not available for test under ordinary running conditions.

There are so many variables in drilling conditions that even if a standard were set up, it would also have to contain many variables. These variables begin with the various grades of tool steel itself and various methods of heat treatment, and the other variables are the formations in all degrees of hardness, texture, material, position, stratification; the varying weights of drill pipe; the sizes of hole, drilling speeds and feeds.

With all these, a directly exact comparison of the cutting qualities of steel is not within the reach of possibility, and steels are therefore gauged on general performance.

Bit Shop Equipment

In a bit dressing shop of the usual kind found today in the field, whether owned by a large producing outfit, or by a drilling contractor, or by a merchant bit dresser, we find the equipment to consist of an oil or gas fired furnace, supplied with air from a power driven blower, with steam used for atomization when oil is used for fuel; a steam hammer with hammer weight from 800 pounds on up to 2500 pounds; an oil country boiler, oil or gas fired, and a hardening bath ranging from a shallow steel pan with an inch or so of water in the bottom to a deep bath set below ground, but with no sign of instrument for accurate temperature control of furnace, steel or bath.

There are many grades of steels used in fish tail bits today; a bit shop recently visited had in it by count, twelve different brands of tool steel stamped on the bit, while many bits bore no mark whatever and of course the identity of the steel in these unmarked bits is lost entirely. Many of the brands were familiar; the carbon content ranged from 50 to 75 points, with an average of 65, while one steel had a 75-85 range. The steel maker's specifications called for a little manganese in some, chrome in others, manganese and chromium combined in still others, and so on, but there was absolutely no difference in methods of heating, forging, drawing out and setting in the quenching bath to harden and cool without further drawing. And no attempt to refine the steel structure preliminary to hardening or to normalize the steel of the blade to prevent cracking.

It is evident then that the handling of these steels is a matter of guess work as to hardening temperature and treatment. Whatever the experience of the smith, it is difficult to see where these temperatures are a matter of judgment, rather than guess, for, not only must the smith estimate the temperature, but he must also guess at the quality of steel, the carbon content, and the alloy content for there is no means of ascertaining the carbon content of a steel except by analysis in a chemical laboratory, and no means of accurately judging by the eye of the temperatures closely enough for securing the maximum hard-toughness of a steel.

And, since hardening temperature depends upon carbon content, to secure maximum hardness, coupled with durability and freedom from brittleness, a guess at temperature is a guess at carbon content.

And, dealing with steels on an averaging basis, we can see that if a steel is furnished to the field that requires any other treatment than the average to bring out its best qualities that are not otherwise obtainable, that steel is more

apt to fail of its purpose than an average steel.

Steel a Compromise

The result is that the steel maker, generally, has made the steel best suitable for prevailing field conditions, for, if a steel is furnished requiring a different more exact heat control for hardening and for required drawing down to given temperature, and this steel is not so handled, it fails, hence the steel furnished today is a compromise between that which the steel maker would like to furnish and the steel that must be furnished.

When a steel leaves the mill, it is out from under the accurate control that made the steel and, although the maker does his best to furnish the best commercial steel, unless conditions of handling in the field are fixed to meet those called for by the composition of the steel, expectations of the manufacturer are not realized in practice, and his steel meets with too much sales resistance, for a steel must be commercial, in order to be sold.

It is quite true that there are replacements of bits by the makers, from claims set up by the user, and in many cases, these claims are a burden. In numbers of instances, these claims are allowed without question, to retain the good will of the user, and his trade, when as a matter of fact, the bits showed definitely that the steel was grossly mishandled by over heating, high soaking heats, cold forging, over heated quenching, under heated quench, hardening and quenching down to atmosphere too quickly, taking a variety of claims for examples, for all of these defects placed in tool steel by the smith in the field are readily and easily discernible by the one familiar with steel. And, also, upon replacement with the same grade of bits, the user, in most instances found them satisfactory, but only after the maker had taken pains to insure that the steel was properly handled.

Hence, in order to secure and retain the business of the field, the steel maker has been compelled to compromise on a steel that is difficult to maltreat—a fool-proof steel.

And, as we shall see, a fool-proof steel is being used today, for the greater part, for, if a steel maker tried to furnish a really good steel in the face of conditions found in the average field bit dressing shop, the requirements necessary for handling such steel could not be met, and the maker of the bit would be swamped with claims.

Very, very seldom is a claim made because a steel does not take on hardness, for hardness is never given an exact test in the field. A majority of claims arise from bits cracking, or spalling off at the edges. This can be avoided, as we shall see, but when a steel possesses no inherent quality that permits it to take on real hardness, with a fair degree of toughness, the defect is far greater than any other, for such a defect cannot be remedied in that steel, but a supposed defect causing cracking can be remedied, and without changing steel.

If cracked bits were due entirely to quenching, then every bit should crack, but under the same quenching, all bits do not crack and we must look to collateral causes of cracks.

Care in Making Steel

As outlined in The OIL WEEKLY of October 3, 1924, the manufacture of steel is controlled in every phase of every process, from selection of ore to final rolling of the billet. In addition to exact technical control by engineers, chemists and metallurgists, much skill, innate ability, is required in all the processes of steel making to first secure a good steel and then to exactly duplicate that steel. And hundreds of thousands of dollars are expended annually in research work to make still better steels, including following these steels on through to the ultimate consumer to ascertain what kind of service is secured.

The sales engineer who visits you in the interest of his steel is engaged in research along with his other duties.

The stresses imposed on a fish tail bit are varied: the greatest stress is from impact while spudding, in which the weight of a string of pipe is dropped from one to three feet onto the bit. Spudding is done in gumbo, though, and the shock is cushioned somewhat. The next stress is torsion applied by the drill pipe, and the next, bending stress set up by pipe whipping in the hole. Hence the shank, blade and edge must have sufficient to resist all of these stresses.

The main trouble is breaking off of the lower part of the blade caused by defects in the steel from incorrect heating and hardening.

In the average bit used today, every requirement as to high physical properties is met; good threads may be cut, pins do not jump excessively, the blade thickness prevents breaking off, and bits are satisfactory except as to cutting edge. The requirement for a good, hard, tough, durable cutting edge has not been met in steels of which bits are generally made today.

All Centered on Bit

The real business end of a rotary drilling rig is the bottom end of the drill pipe—the fish tail bit. We select drilling equipment with great care, without reference to cost as between good equipment and mediocre equipment, to keep the bit on bottom turning around; we ship that rig and pay freight on it and haul it to the well to turn that bit around on bottom; we use two boilers or three and two pumps to prevent that bit from stopping; we use the best kind of drill pipe to turn that bit effectively; we use tool joints and make-and-break rotaries to get a bit back on bottom quickly to set it turning; we use high derricks to make a roundtrip in quicker time, to get a bit back on bottom to turn it around; the power used on the drilling rig has been increased and increased and then increased some more, to handle pipe fast, to get that bit back on bottom and turn it around; we buy fast tongs, good slips, and all kinds of devices and appliances for speed in all kinds of operations, to keep that bit on bottom turning around, and then, when the steel for the bit is selected, the field rests right there, without going any further, while, if the bit steel itself and its forging, hardening and tempering were given only a commensurate part of the same class of attention, the field would find that a considerable part of the expense incurred in getting a fast rig would not be necessary, nor justifiable.

Prospect holes are notoriously expensive per foot. Distance from supply house, absence of bit dressing shops, fuel supply, water supply, transportation, maintenance of equipment and administration of the whole operation make footage costs greater in prospect holes than in proven fields. Drilling in strange formations, trying to locate oil, and at the same time to locate water, good seating formations, coring, and so on are further causes of long duration drilling time in prospecting.

Due to the temporary nature of a prospect hole, bits are not maintained usually as well on a prospecting rig.

But, because of other higher expense, the importance of durable, hard cutting edges is emphasized and the best methods and steels are more necessary in this class of drilling.

One Best Grade

The writer believes that there is one best grade of steel for fish tail bits—(not one best brand, but one best grade), that meets with every requirement for high dynamic properties, toughness, hardness, resistance to abrasion, and with correctly formed bit, blade angles, thickness, contour, rake, included blade angle, slope, accurately heated for forging, accurately heated for normalizing, accurately heated for quenching and drawing, this grade of steel is profitable to use.

Although all this preparation for making good bits may seem lengthy, still the investment in time, energy, talent and money returns the same many fold, not next year, nor next month, not next week, but the same day—perhaps within the hour.

Right at this time, though, there are coming into use entirely new cutting metals, with entirely newly devised blade forms, based upon scientific accuracy after investigation extending over many years. The field is giving warm reception to these new edges and blades, for these bits are making from three to eight times as much hole per bit in the same formations—not due entirely to the new cutting metals, nor to new blade forms, but more to the fact that the carbon steel compromise has permitted these better comparative performances.

Test for Hardness

The writer has tested the hardness of bits from an average field bit dress-

ing shop handling average field steels and finds that if these were subjected to the tests all the way across the hardened edge of the blade, that roller bits must pass, there would be one hundred per cent of rejections for, not only did these bits fail to possess an equal hardness, but the degree of hardness across the edge varied so much as would cause rejection.

If the rifles used by our army were handled in even a little better way than fish tail bits are today, our army would be put out of action after one hundred shots, for, even though the steel in the barrels were of good quality—the best quality—the requisite hard-toughness of the barrel to resist abrasion and heat could not be placed in the steel. It is only by the most rigid inspection that American arms manufacturers have been able to make riflles with lands of sufficient hardness and toughness to possess sustained accuracy. Not only does this inspection begin with the ore, but it continues unremittingly on through every detail until the rifle barrel is mounted in a stock and is tested for accuracy and durability and freedom from warping or distortion due to pressure and heat.

The great quantity of production of the automotive industry, the world's best example of steel product, is due to careful, rigid maintenance of requirements; the flivver depends for its very cheapness upon the most accurate knowledge of steels, both practically and technically.

Difficulty of Tests

The average hardness of 70 carbon tool steels, making the hardness test close to the edge of the bit, can be made to range around 65; of 90 carbon tool steel, 75, and of higher carbon, hardened tool steel, up to 110 Scleroscope, and while the additional hardness makes for greater capacity in softer formations, brittleness accompanying the very hard steel makes it wear off more readily when great pressure is placed on the bit in medium and hard formations. These tests are very difficult to place on an exact comparative basis, though, in the field; that is, there are few wells in which uniformity of stratum and depth are such that a direct comparison in practice can be made.

Beyond question, a laboratory can be set up with methods of testing, in which actual field conditions can be duplicated for better determining the qualities of steels and the heat treatment used in bits.

For other uses, methods have been devised for making accurate tests to secure properties desired in steel for almost all other purposes and various technical associations have compiled the results of these methods into definite specifications for steel and for treatment.

But nowhere do we find mention of tests for tool steel for the cutting edges used in formations of the earth. Nowhere can we find exact cutting tests of steels used for fishtail bit drilling; nowhere do we find any relative standard of steel for such purpose, and the field takes the only course available, which is to select a relaible manufacturer of bits and buy from him.

Steel today is a brain product; it is no better and no worse than its parent —the minds of those handling it from ore to billet. And when is goes into a fish tail bit into the hands of the field smith, the history of that steel shows that it must still have more than brawn treatment, but, at this point, we can see a total discard of the methods and means that followed the bit up to the furnace used for dressing.

Requirements of Bits

As in the description of steel making previously printed in The OIL WEEKLY, steel will here also be divided into two general classes—carbon steels and alloy steels, although this paper is confined to tool steels.

Steel used for fishtail bits must possess other qualities in addition to durability of cutting edge, for the bit must be initially forged into shape and thereafter forged out several times while redressing, a thread must be machined on the shank, the blade must not be brittle or it will break off while spudding, and the steel must possess sufficient dynamic strength at and just back of the hardest edge to prevent the edge from chipping off also.

All parts of the bit, excepting the lower part of the blade are used in a normalized condition, or that is, should be, and the thickness of blade to provide stock for dressing several times is sufficient to provide strength against the shocks and torsions of drilling. With all these satisfied, the most important feature is the durability of cutting edge in which the most difficulty is found in satisfying.

Carbon Tool Steel

Carbon in steel is purely a hardening agent, and the degree of hardness depends upon the carbon content. The lower limit of carbon allowable, to permit a steel taking on hardness at all, is around 50 points carbon, while the upper limit, for the keenest edged, hard tools is around 150 points carbon.

Examples of the carbon content of steels for various ordinary purposes, taken from specifications, are given below:

Knife blades	1.10 to 1.20
Axes	.95 to 1.05
Wire drawing dies	1.40 to 1.50
Car and locomotive springs	.90 to 1.10
Circular saws	.90 to 1.00
Machinists chisels	.85 to .95
Flue cutters	1.20 to 1.30
Scythe blades	1.00 to 1.10
Ditching cutters	.80 to .90
Stone planing edges	.90 to 1.20
Twist drills	1.10 to 1.20
Safety razor blades	1.10 to 1.20

In all these articles tabulated we usually associate uniform hardness, and in those with edges, uniformly hard edges are found; such uniformity is secured by correct selection of steel, and correct heat treatment. For not only must these be correct, but exact inspection tests are made of the hardness of these products, using either the Shore or Brinell hardness tester continually, meaning that in one day's operation of a works producing small articles of this kind, several thousands of tests are made, resulting in inevitable rejection of portions. We may be sure that if the blades of a well-known safety razor had to be heated, forged, hardened and tempered anywhere but in closely regulated furnaces, we would still be using the razor of our grandfathers.

Carbon in Fish Tail Bits

But, for fish tail bits, the carbon content goes as low as 55 points and seldom as high as 80 points.

With proper heat treatment, higher carbon steel in fish tails can be used and the bits made harder on the edge, for higher carbon steel than ordinary in fish tails can withstand shock, for note the carbon content of car and locomotive springs, 90 to 110 points.

Carbon steels higher than 70 take on a greater hardness, and, on up to 90 to 100, undoubtedly give better cutting service, but careful workmanship in manufacture and dressing is required to insure that blades of this steel have no brittleness that would allow them to break off under the stresses of drilling. A steel with 1.00 carbon must be drawn after hardening and, as general field practice eliminates any drawing of fish tail bits, the writer knows of no field in which steels with carbon content as high have ever been used.

The average field smith does not draw a fish tail bit to color, although the same smith invariably draws the temper of his cold chisels to color after hardening.

Keeping Out Grit

The writer believes that, eliminating hard rock formations that are best drilled and should be drilled with roller bits, hard shale formations with sand—grit—are the most difficult to drill, consequently, such a formation lends itself to the testing of bits in practice. In many localities, there are thick beds of this type of formation—in California, in North Texas, in Oklahoma, in Southwest Texas.

In this class of formation, grit is ground up further due to the matrix binding it together, and, as it is very difficult to settle fine sand out of slush, such grit may be recirculated continuously until a well is finished, although there may have been only a small percentage of depth containing grit, which the bit may have passed through previously.

When there is so much sand in slush

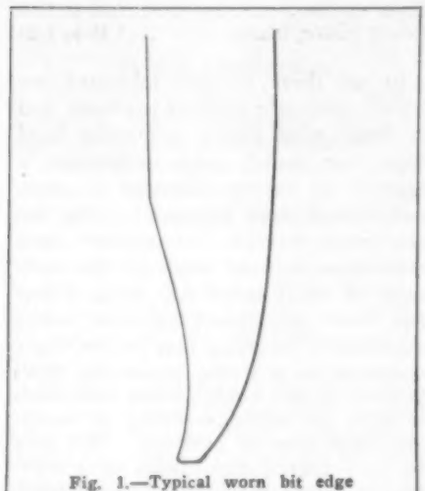


Fig. 1.—Typical worn bit edge

that it settles to the bottom of the well continuously, until the slush selectively flushes out the smaller particles, the grains again pass under the bit, whether the formation just at that time has sand or not, wearing the cutting to the shape in front as shown in Figure No. 1.

The precaution of settling out fine sand is worthy of careful consideration from the bit maintenance standpoint, as well as from a casing or drill pipe freezing standpoint. Thin mud, a wide ditch and a broad slush pit tend to settle out sand more readily and when sand appears in slush, thinning up as much as the hole will permit removes sand.

After a thick stratum of sand bearing formation is drilled through, and the hole is to be drilled to greater depths, it may be even necessary to pump the slush pit out into a separate reserve pit, and then to fill the pit again with sand free slush from the old reserve pit.

Indiscriminate pumping out of the pit into the reserve pit diffuses sand present into all the slush, while, if a division wall is placed across the reserve pit at the time it is built, and a swing joint placed in the pump discharge to reserve, sand impregnated slush can be pumped over into one reserve pit and kept from mixing with sand free slush.

We have always endeavored to keep sand out of slush to avoid wear on pump liners and packing, too, but the most important reason for eliminating sand from slush is to keep the bit from losing its edge.

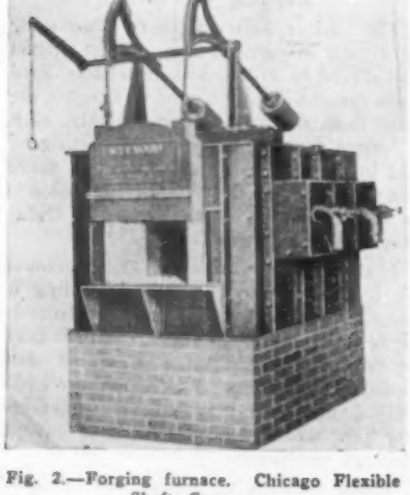


Fig. 2.—Forging furnace. Chicago Flexible Shaft Company

Various mechanical methods of removing sand have been attempted, but these require additional equipment and expense. The use of ordinary mechanics of fluids can accomplish removal of sand more easily and at much less expense.

Heating Furnaces

Furnaces may be fired with oil and gas, or heat may be radiated from electric resistors to steel, and pyrometers can be accurately applied to this type of furnace. Coke and coal fired heating furnaces and forges, heating with a direct fire, cannot have an accurate gauge of temperature made with the thermo-couple on account of the close proximity of flame with its greatly higher temperature.

There are so many furnaces made that a description further of them is not necessary, although there are many types, and a selection should be made to correspond to the size of work to be handled. Figure No. 2 shows an excellent example of oil fired heating furnace for forging work.

Pyrometer equipment should be of the recording type, so that a good performance can be duplicated. Many furnaces are equipped to-day with both pyrometers and magnetic indicators; the pyrometer guarding against rapid heating, excessive temperature, and insuring that quenching will be done on a rising heat, while the magnetic indicator insures that quenching will be done at critical temperature, whatever carbon content possessed by the steel. In addition to a graphic record of time and temperature, pyrometers may be equipped with lights displayed automatically—a white light display when the temperature is carried correctly in the furnace, green for working temperature too low, and a red light when the temperature is becoming too high.

The magnetic indicator may be located near the furnace and when the steel is applied, a light flashes on if the steel has lost its magnetism, otherwise further heating is necessary. It is not such an easy matter to determine if steel has lost its magnetism by applying a magnet, for the magnet itself may heat and lose its magnetism also.

The phenomenon of steel losing its magnetism at critical temperature has been fully described in The OIL WEEKLY by S. D. Tuthill, metallurgist.

Forging Tool Steels

In forging the bit blank from the steel bar, the hammer should be sufficiently heavy and fast, suiting the size of piece, that forging can be accomplished as quickly as possible without heating too many times. Small bits require a smaller hammer than large: the weight of hammers used ranges from 800 pounds up to 3500 pounds, although the writer considers that a 3500 pound hammer is too heavy for this work for this size of hammer can forge a bit blank when it is below the forging heat, setting up unnecessary forging strains. But, if the work is properly heated, the heavier hammers do the work faster.

Fig. 3.—Bit forged out for sharpening

For dressing bits, the hammer need not weigh more than 2000 pounds; the writer once installed a bit dressing shop with a 750 pound hammer that dressed an average of fifteen bits per hour, nine inch size.

Hammers driven with air are faster, strike a faster, harder blow than hammers driven with steam. Wet steam slows down the hammer appreciably.

When drawing the blade down to an edge initially or in dressing, the hammer blows should be confined to the flat side of the blade. To continually edge the blade up on the steam hammer anvil will change the grain of steel according to the impact of the hammer. Bits so edged up and forged show a greater percentage of cracks, although cracking is usually attributed to hardening.

To draw a blade out to gauge, with a uniform tapering section, and particularly a worn bit, it may be necessary to draw portions of the blade out beyond gauge,

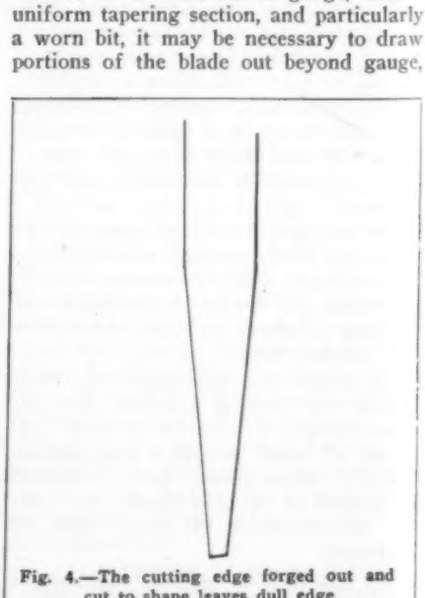


Fig. 4.—The cutting edge forged out and cut to shape leaves dull edge

and these outer portions should be cut off instead of being hammered back into place, as shown by the dotted lines of Figure No. 3.

The cut off edges must be dressed to gauge, from A to B, of the figure, but the heavy hammer should not be used for this, because the greater impact, or follow up of the blow from a heavy hammer sends the effect of the blow down through the blade. A sledge hammer localizes the blow.

After forging out the blade and cutting off as shown in Figure No. 4, the cutting edge will be thicker than required, and the edge should be further sharpened to an exact, even taper and keenness. And after finishing this final sharpening, the blade should be normalized to remove forging strains and to refine the steel structure, before heating for hardening.

Carbon tool steel should never be heated to welding temperature. Welding, or flowing temperature is indicated by a characteristic "greasiness" to the feel of a small rod held in the hand, rubbing the heated steel surface with one end. If the steel is below flowing temperature, roughness indicates such, but if at or above the flowing temperature, the surface assumes a "greasy feel". Welding temperatures are destructive to the hardening properties of steel and a steel heated to this point should be scrapped for it has no further value as a cutting steel.

Normalizing All Steels

After forging the bit blank, all bits should be carefully normalized, and after forging out a bit when re-sharpening, the bit should be normalized from the edge up further than any forging has been done, to remove all internal strains and brittleness set up by the higher forging temperature, before hardening.

Various steels require various normalizing treatment. All carbon steels and most alloys can be normalized quite simply, using the oil or gas fired furnace, lead or chemical salts bath, and warming the steel thoroughly and slowly, turning the forging a number of times to secure uniform heating throughout. Furance temperature should not be too high when the bit is placed in it, and the air blast should be gently applied to allow slow, even penetration of heat, and even fusion throughout the whole bit blank, and well up the blade of the bit being re-sharpened.

In an open fire, coal or coke fired, there should be an ample, even supply of fuel between the tuyere and steel, for intermittent blasts of air, and then flame, subject the steel to cooling and heating alternately.

Normalizing temperatures range from 1350 F. to 1425 F. in various tool steels.

Normalizing specifications for some carbon steels require heating to the critical point, quenching in oil, and then drawing at 600 F. to 1000 F. While this refines the grain more than normalizing without quenching, the writer believes that the strains set up in the heavier sections of the bit, that may cause cracking, are to be avoided, and, as the shank and blade possess ample dynamic strength, plain normalizing by heating is better practice.

Gentle heating does not intensify and localize heat at the points and edges. Heat penetrates thin sections more quickly than thick sections and a vigorous blast will overheat the thin sections.

The effect of normalizing a forged piece of steel is shown in Figure No. 5, where it is seen that the coarsely crystalline structure of the forged piece has been refined into the velvety grain of the same steel after normalizing.

—Courtesy the Central Steel Co.

Fig. 5.—The effect of normalizing is shown in the above two cuts

Hardening Tool Steels

When carbon tool steel is heated, its sensible temperature rises uniformly with each uniform addition of heat up to a given point. At this point, added heat, instead of increasing the sensible temperature, is absorbed by the steel in changing its structure chemically and mechanically. When these changes in the structure of steel are completed by heat, the sensible temperature again rises uniformly with uniform heat addition, on up to the melting point.

During this checking of the rise in sensible temperature, termed the critical point, the steel loses its magnetic properties, its uniform rate of expansion due to heat is checked, and the steel then possesses the quality of becoming hard when cooled quickly and, up to this point, even though there is ample carbon in it for hardening, steel possesses no hardening qualities when quenched.

Without lengthening this discussion unduly, the changes set up in the steel at critical temperature are such that carbon is diffused and alloyed—so to speak, or is melted up and combines with steel like sugar melts and the dissolves in water, while, at other temperatures, below, carbon is not in this combined state, but is more like grains of sugar in the bottom of a glass of water.

The effect of heat on the grain of carbon tool steel may be shown practically by an old experiment consisting of first nicking a small bar of the steel, say ten inches long, at intervals of half an inch, then heating one end to a white heat with graduated temperatures down to a dull red toward the other end, and then plunging into water.

Upon breaking the bar at the nicks, the end heated white hot will be found open or coarsely crystalline for over heating destroys the homogeneity and consequently the value of tool steel; the next broken section shows a finer grain, and the next succeeding sections still finer until one piece is found with that smooth, velvety even grain so highly sought by experienced tool steel users. It is the exact quenching point temperature that sets up this fine smooth grain, and which is the critical temperature above which steel is not refined.

The remaining sections will show a lesser refinement of structure and the portion heated to dull red will show no increased hardness because critical temperature was not reached.

Testing Method

Using this critical temperature as a basis, Messrs. Leeds & Northrup have developed a method, termed the hump method, for determining the critical point of any steel, utilizing the lag in the rise of sensible temperature at the critical point, with a potentiometer type pyrometer, which method is quite practical, being in extensive use over the country.

Figure No. 6 shows a graphic record of temperature and time when heating a piece of tool steel in the furnace. The pyrometer couple is positioned so that the steel is laid on top of it and, as shown in the graph, furnace temperature was that shown at T, or 1400 F.; when the

(Continued on page 53.)

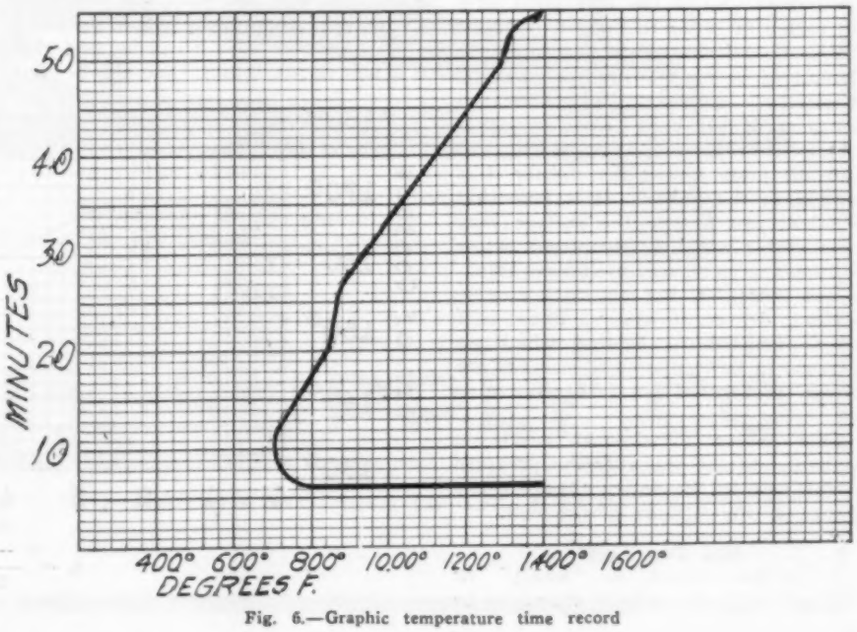


Fig. 6.—Graphic temperature time record

Things to Remember About a Belt

Proper installation and proper care insure long life for this type of power transmission

By Roye Munsell
Staff Representative

THIS is to be a brief discussion of some standards of practice as regards the use of belting as a method and means of transmitting power. It ought to be said at the outset that the writer holds no brief for any particular kind or make of belt, or belts in general as a power transmission connection.

The best belt will rather ambiguously be defined as the best transmitting connection between supplied power or drive pulley and applied power or driven pulley. The performance of a given belt as a transmitter of power is only to a limited degree dependent upon the trade-mark which happens to appear on that belt, the large consideration, it is believed with any belt, is application and method of use.

If the pulleys are too small or too narrow, if the speed of movement is extremely low or too high, if the surface of contact on the pulleys is inadequate, no belt, no matter what its characteristics, will be efficient and economical.

Conditions

A belt is a band and how well it performs its duty, i. e., transmits power, depends upon:

1. Tension of belt.
2. Coefficient of friction existing between belt and pulley.
3. Speed at which belt is run.
4. Arc of contact, or the arc of the pulley which is embraced by the belt.

A belt transmits power because of its frictional contact with the face of the pulley. Since the belt must grip the pulley in order to turn it, it ought not to be inferred from that that the amount of power transmission may be effectively increased by increased tightness of the belt. Now to a certain extent it is true that a belt will transmit more power the tighter it is applied to the pulley. It is true that if a belt just lies on the pulleys very little power will be transmitted; when tightness is increased, the power transmitted increases, but not to a corresponding degree, however. There is a point, furthermore, beyond which no increase in tightening will increase the power transmitted but rather decrease it.

This rather paradoxical result is probably due to the extreme pressure of the belt on the pulley changing the nature of the surface of the belt.

Not Too Tight

A surface which is "wooly" or "hairy" such as a belt is shown to be under a microscope, will bed down under pressure, it is recognized. At a slight pressure the greatest number of these projecting bodies will impinge on the surface of the pulley, and the contact will be most efficient. Under excess pressure, it follows that these projections will tend to flatten and offer little resistance to the movement of the surface of the pulley over them. This is the slipping point.

A homely illustration of this phenomenon can be gotten from a common clothes brush when it is moved over a comparatively smooth surface with varying degrees of pressure.

Long before the point has been reached where increased tension fails to increase power transmittal, there has been a damaging strain put upon the shafts and bearing, as well as the belt itself.

A tight belt "pulls" on bearings making them obviously harder to turn, and this increases its own load.

If a belt must be drawn more than moderately tight to get it to work, it is likely that there are other details to receive attention first. More about this will be said presently.

Giving a Rest

A belt which runs loose, will of course have a much longer life than one which is drawn tightly. A belt running slack on one side automatically relieves itself of the effects of the driving strain when travelling on that side. This is a "resting space" during which the belt can relax and return to its natural condition.

In a general way, it can be said that if a belt is run loosely one can be sure that he is not injuring it and lessening its ultimate driving power.

Every belt has a proper tension under which it ought to be used. This will vary according to its character and the operating conditions. As a rule, so long as a belt will start its driven pulley easily it is tight enough for work. That is not to say that a belt should be run so loose that it will wobble and wave, still it should be slacked to the point where it travels quietly and without flopping from side to side, and yet carry the load.

If a belt slings from side to side and a flapping fold forms between the driving and driven pulley, there is scarcely anything to do but take it up at the fasteners. There is no reliable substitute for the "knife."

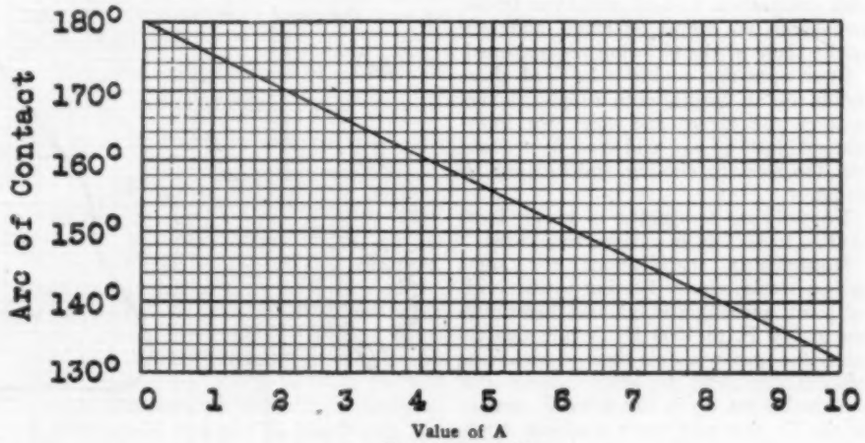
Placing the Idler

Idlers, except where necessary because of the nature of the drive, are not always to be desired. If an idler is applied with the aim of increasing tension the best place is near the smaller of the two pulleys.

Practical experience has shown that an idler should in no way increase the strain on the fasteners or the load on the bearings. The proper and very good use of an idler is to increase the wrap of the belt on the pulley—the arc of contact.

The driving power of a belt, other things being equal, is commensurate with the arc of pulley contact. It is almost safe to say that any increase in arc of contact will result in a proportionate increase in the efficiency of operation.

The part which the arc of contact



Arc of Contact chart

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The G. H. & H. Jar Down Wire Rope Knife is complete in itself—it does not require any extra set of jars or bumper, and there are no joints to become unscrewed.

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The parts are few in number, extra strong, and readily accessible.

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The G. & H. New Style Wire Line Spudding Shoe is strong, durable and easy to handle.

It is equipped with a safety device which eliminates danger to workmen, and the design insures longer life for the jerk line.

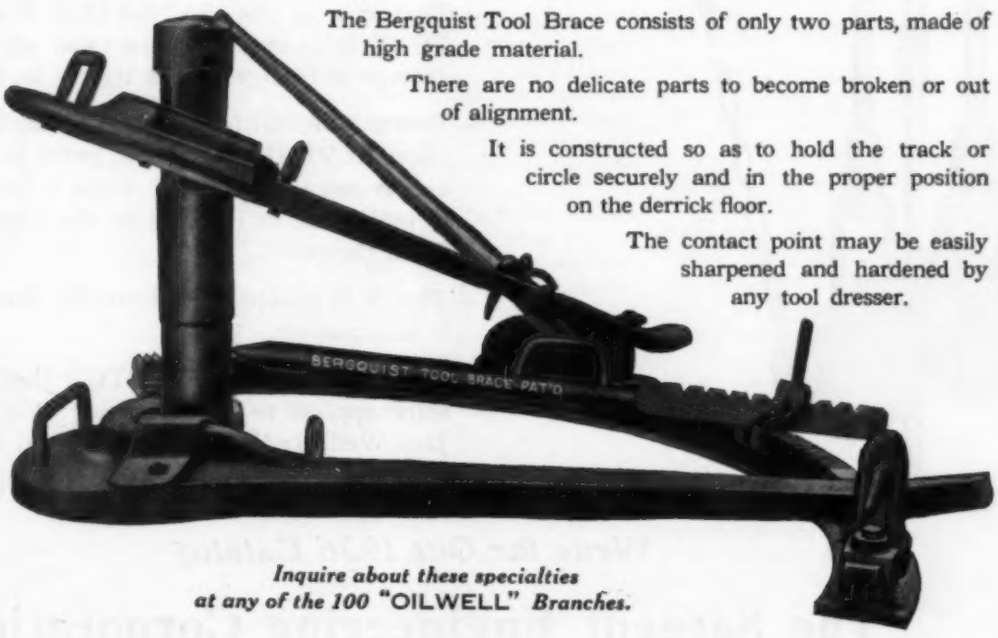
Made of cast steel. Is safe, sure and satisfactory.

The Bergquist Tool Brace consists of only two parts, made of high grade material.

There are no delicate parts to become broken or out of alignment.

It is constructed so as to hold the track or circle securely and in the proper position on the derrick floor.

The contact point may be easily sharpened and hardened by any tool dresser.



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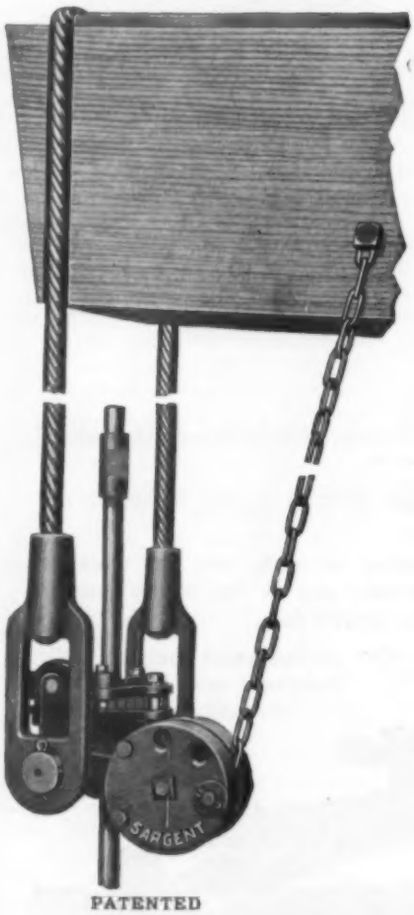
It PAYS *to* TURN *the* RODS *with a*

SARGENT ROTOR

More of These Rotors Sold Than All Other Makes Combined

The PRODUCTION MAN who gets MORE production at less cost per barrel will tell you he EQUIPS every Pumping Well with a SARGENT ROTOR.



PATENTED

—That by so doing his PUMPS and CUPS wear from thirty to fifty per cent. LONGER.

—That by EQUALIZING wear on Rod Boxes it greatly increases their life and reduces PARTING JOBS to a minimum.

—That he is NEVER troubled with Rods coming UNSCREWED in the well, because the SARGENT ROTOR turns the Rods to the right and therefore keeps them MADE UP.

—That the SARGENT ROTOR prolongs the life of the POLISH ROD and STUFFING BOX PACKING.

—That due to the PATENTED FRICTION FEATURE it is impossible to twist off rods or do any damage if Plunger sands tightly in Pump Barrel.

—That the SARGENT ROTOR is designed to stand up under SEVERE SERVICE, yet it is not cumbersome and is not in the WAY when it becomes necessary to pull Rods, as it is left on the Polish Rod and laid down therewith.

—That it is spaced just above the Stuffing Box where it is accessible.

—That it is the ONLY ROTOR that can be successfully applied to any Pumping Well, whether it be Jack Well, Hydraulic Lift or Special Long Stroke.

—And last, but not least—THE PRICE IS RIGHT.

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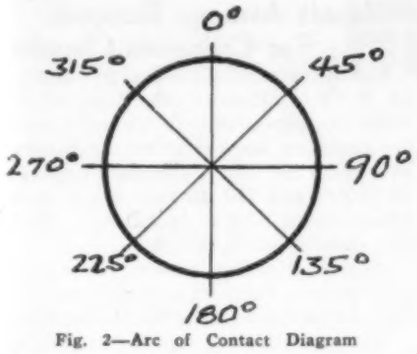
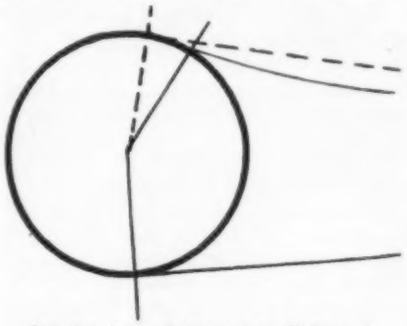


Fig. 2—Arc of Contact Diagram

plays in the performance of belt transmission is shown by the following table which gives in a practical way the percentage of horsepower transmitted by the most easily obtainable arc of contact. A contact surface of 180 degrees is used as a basis.

Arc of Contact of Smaller Pulley	Percentage of H. P. Transmitted
90	50
100	56
110	61
120	66
130	72
140	78
150	83
160	89
170	94
180	100

There are several common ways of finding the arc of contact of the smaller



Relative Arcs of Contact of Tight and Loose Belts

pulley. One of the simpler methods is by the formula:

$$\text{Arc of Contact (in degrees)} = \frac{180 - 57.3\ (D - d)}{C}$$

C=Distance between centers.
D=Diameter of large pulley.
d=Diameter of small pulley.

First, multiply the difference between pulley diameters by 57.3, divide the product by the distance between centers, and then subtract the resultant quotient from 180. The difference is the arc of contact in degrees.

Anoither way of arriving at the same figure is by some such chart as is shown in figure No. 1.

In practice the ideal driving side is

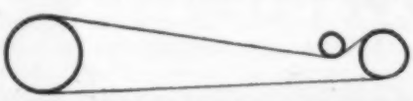


Fig. 4—Idler Too Tight

the lower side since the sag on the upper side increases the arc of contact of both pulleys by just that much. This effect is not secured, however, if the belt is run tight.

Place of Speed

Another factor affecting the transmitting power of a belt is the speed at which it is run. Additional speed will, up to a certain point, increase the power delivered, but the best speed, considering the life of the belt, is probably a moderate speed, rather than a very high speed.

There are distinct limits to the speed at which a belt should be driven. Some-

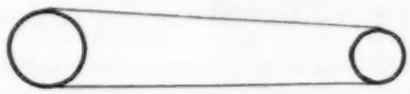


Fig. 5—Too Much Tension

where around 400,000 feet a minute is, no doubt, the highest rate advisable for most belts.

With the ordinary drives used at refineries and natural gasoline plants, where velocity of the belt is not great, it is not necessary to consider the effect of centrifugal force or the tendency of the belt to always keep moving straight ahead rather than curve around the pulley. As the speed of the belt increases the centrifugal force increases and its effect is a difficult matter to contend with.

The common cause of fluttering is the air cushions which are formed when the centrifugal force keeps the belt off the pulleys. A belt made thick enough and heavy enough to prevent fluttering under this condition is certain to be to thick to be sufficiently flexible to perform well.

About the only way to make a high speed belt work well is to select a light one that will take as easily as possible the incessant and rapid bending without undue distress, and then increase its tension to the point where it will hug the pulley without unnecessary strain.

On fast moving pulleys the centrif-

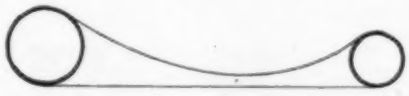


Fig. 6—Belt Too Loose Flaps and Runs Off

ugal effect of the belt ought to be taken into consideration in determining the width, etc., of the belt to be used.

Smooth Pulley Best

There is, or rather was, a theory in much vogue that a belt would do more work on a rough pulley than on a smooth one. Tradition has it that one of those who championed this theory obtained his data with a shoe string and a napkin ring. It seems that this particular individual found that the shoe string pulled harder on a particularly rough section of the napkin ring and from this very good bit of empiricism postulated again the theory that perfectly smooth pulleys are less effective and roughness is, therefore, to be desired as an aid in the transmittal of power.

Actual tests have shown the very opposite to be true. Smoothest pulleys drive best, but the smoothness insisted on here must not be taken to mean "slipperiness." It is well known that the belt and pulley surfaces after working together for a while assume a smooth appearance, taking hold best in proportion to the smoothness they acquire.

The smoother the surfaces, the greater the actual contact between the belt and pulley and the more particles of each impinge on the other. Also, if the surfaces are smooth less air will be caught between the belt and the pulley, the air acting to cushion the belt from the pulley.

It has been found that the application of a coat of varnish to a pulley will greatly increase its driving power. To go about doing this, the pulley is first thoroughly cleaned of oil and belt dressing with gasoline. Then a solution of muriatic acid is applied and allowed to remain on until a slight coat of rust has been formed. After the excess muriatic acid has been washed off and the pulley thoroughly dried, a coat of white lead paint is spread on. Following this, three coats of a good grade of varnish are put on, al-

Fig. 7—Approximate Tension for Economical Drive

lowing sufficient time for drying between coats and before the belt is put back on. This varnished surface is almost ideal for the face of the pulley.

Another common source of lack of sufficient contact between pulley and belt is a stiff, unyielding belt. Such a belt fails to hug and engage the pulley, and rides up, cushioning in places on the air caught between it and the pulley surface.

The Salesman Knows

If a belt is of the right thickness, the remedy is some form of a dressing. A dressing must, however, not make the belt "sticky" or "tacky," but only soft and pliable, still not spongy or flabby.

The best rule in using a dressing is to follow the recommendation of the belt manufacturer. It can be expected that he will not furnish or advise anything which will contain harmful ingredients, but a preparation that will carry certain elements which are also preservatives to add life to the belt rather than shorten it.

In conclusion it might be said that of all these factors which contribute to the good driving performance of a belt, giving it more tension is the poorest. Give it more arc of pulley contact, run it faster, improve the driving surface

of the pulley and the belt, and increase tension last, if at all.

Know the Pull

In selecting a belt for a particular drive it is well to consider first the nature of the power pull which will be encountered. There are two kinds of power pull—a steady, even pull and a

Fig. 8—Sag on Lower Side Uneconomical

jerky pull. Each requires a belt with certain characteristics to secure the best operation and performance.

A belt for a strong steady pull must be of such a nature as to resist strain and minimize stretching. If this belt were used on a jerky pull, though, it is almost certain to be of short life if not soon broken.

A belt for an interrupted pull, such as one finds on compressor jobs, must be springy so it will stretch at the load peaks and recover thereafter. This is necessary to secure an even drive.

Belts and pulleys should always be kept as clean and free from dust and oils as possible. Some oils particularly mineral and animal, are very destructive to most belts.

Without consciously going counter to the recommendations of the belt manufacturers, soap and water is very good for cleaning rubber belts. If a scraper is necessary also, care ought to be taken not to scratch or cut the surface of the belt.

If a leather belt has become oil soaked, Fuller's earth, by virtue of its properties of absorbing oily substances, is sometimes used to clean the surface. After being left on for a time, it is removed with a dull wooden blade.

A leather belt is most effectively cleaned by soaking in benzine or gasoline and then rbbing and scraping the oil out. Before being used again, it is imperative, however, that the belt be redressed well.

To Find Length of Belt

The most exact way to find the length of belting required on a certain drive is to use a steel tape line. To

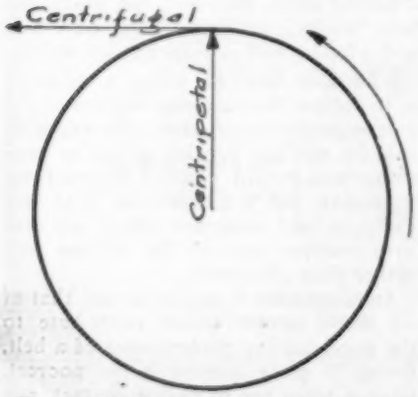


Fig. 9—Centrifugal and Centripetal Forces Diagramatically Shown

use twine or light cords is risky business because it is sure to stretch just a little.

If conditions do not make possible the use of a steel tape, the length of the belt may be calculated as follows:

A. If pulleys are of same diameter.
1.—Multiply the sum of the diameters by 1.57.
2.—Add twice the distance between pulley centers.

The result will be the total length of the belt required.

B. If the pulleys are of different diameters
1.—Multiply the sum of the pulley diameters by 1.57.
2.—Multiply the distance between centers by 2.
3.—Square the difference in pulley diameters and divide by four times the distance between pulley centers.
4.—Add together the results of steps 1, 2, and 3.

The total is the length of belt required if the diameters of the pulleys are not the same.

To Find Length of Crossed Belt

If the belt is to be crossed, the length can be found as follows:

A. If the Pulleys are of the Same Diameter

$1.57\ (D_1+D_2)+2\sqrt{D^2+C^2}$

D=Diameter of pulleys (both same)
C=Distance between centers in feet.

B. If Pulleys are of different diameters.

$1.57\ (D+d)+\sqrt{(D+d)^2+4C^2}$

C=Distance between centers in feet.
D=Diameter of large pulley
d=Diameter of small pulley

Length of Belt to Be Changed

When the length of a belt is to be changed because of changing the size of pulleys used, the amount to be added or cut off is found by simply remembering that 1½ times the difference between the diameters of the pulleys in inches is the change to make in the belt. In changing to a larger pulley the amount arrived at is added and in changing to a smaller pulley it is cut off.

To Find Length of Belt in Roll

When the belting is tightly rolled, the amount in the roll can be very easily calculated. This saves time both in seeing if the length in a roll is sufficient for the job at hand and in taking inventory of stock.

The steps are:
1.—The sum of the diameters in inches of the outer and inner coils are multiplied by .1309
2.—This figure is multiplied by the number of coils in the roll.

The result is the total length of the roll in feet.

The formula is:

$L=.1309\ n\ (D+d)$

L=Length in feet of the roll.
n=Number of coils in the roll.
D=Diameter of outer coil.
d=Diameter of inner coil.

Wildcats Arrange Banquet For California Chamber

Los Angeles, Calif.—Under direction of W. R. Guiberson, chairman of the Wildcats, arrangements are being made for the most successful annual banquet ever held by the California Chamber of Mines and Oil, to take place in the Fiesta room of the Ambassador Hotel the evening of April 7th.

Alan E. Morphy, secretary and treasurer of the Pacific Gasoline Company, will act as toastmaster for the occasion.

The entertainment program will include numerous musical numbers by quartets and soloists and a special dancing act by a well known West Coast artist. W. R. Guiberson, of the Guiberson Corporation, who has delighted guests at previous Chamber of Mines and Oil banquets, will render a baritone solo.

Final notices and reservation blanks will be in the hands of oil operators by March 15th, prior to which date no reservations can be made.

The personnel of the Wildcat committee is composed of Mr. Guiberson, chairman; Ward B. Blodget, W. W. Copp, W. S. Clute, Joseph Jensen, H. A. Kassebaum, Harry Maxwell, C. R. McCollom, N. C. Needham, Wendell M. Smith, Martin Van Couvering, Arthur Wickstram, Alan E. Morphy, F. E. Foster and J. E. Elliott.

National Opens in Amarillo

Fort Worth, Texas.—The Panhandle district of Texas and the Artesia, New Mexico, field have been merged into one sales district by the National Supply Company, and district offices established in the Amarillo building, Amarillo, Texas, with J. O. Ingram in charge as manager, according to C. C. Cartwright, vice-president. Stores are maintained at Artesia and Panhandle. Hal Greer, formerly manager of the Olney store for National Supply has been placed in charge of the Panhandle store. Bruce Nesbit succeeds Greer at Olney, and S. J. Alexander, manager of the El Dorado, Arkansas, store, succeeds Nesbit as manager of the Breckenridge store.

Oil Permittees May Cut Timber of Government Land

Wasington, D. C.—Only such timber as is required for fuel may be cut on federal lands by oil and gas permittees, under regulations promulgated by the general land office.

Applications for permission to cut timber must be filed before any trees are felled. In cases where the land from which it is desired to cut wood is occupied by a settler or is part of an unperfected homestead entry, the applicant must serve notice on the settler or entryman, showing the amount and kind of timber applied for. In such cases permits will be issued only where there is an abundance of timber on the land.

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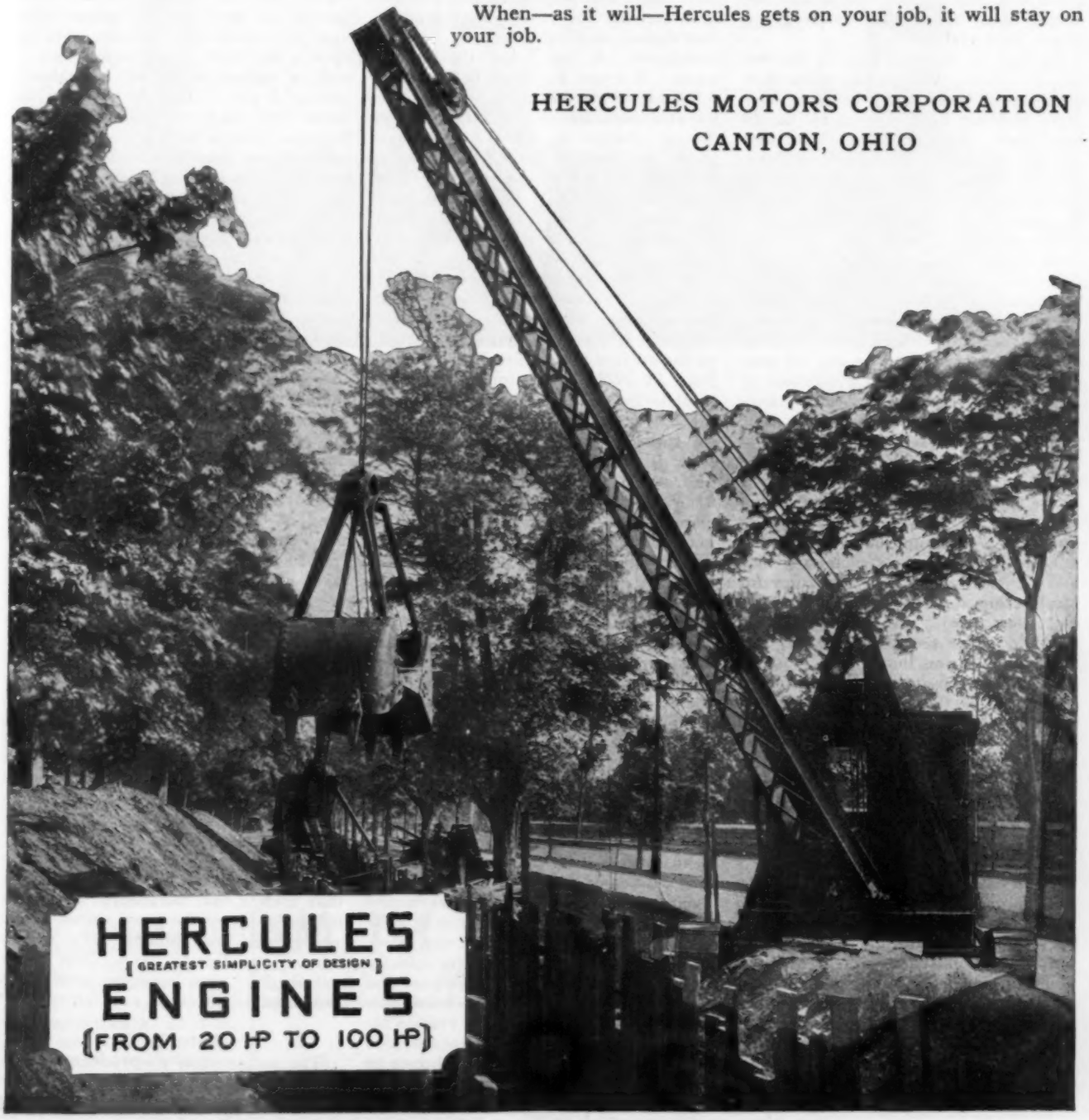


Say you saw it in The OIL WEEKLY

Industry to Resist Tax Measure In Oklahoma

Paper read before Western Petroleum Refiners' Association at Fort Worth, March 4

By Harry H. Smith

Secretary Mid-Continent Oil & Gas Association

Fort Worth, Texas.—Before reading his paper on taxes at the convention of the Western Petroleum Refiners' Association here March 2, 3 and 4, Harry H. Smith, secretary of the Mid-Continent Oil & Gas Association, said he had observed taxes to be like water—going where least resisted.

To that he added that in his opinion the oil industry was paying more than its share of taxes today because these taxes had not been resisted as should have been. He gave it as a fact that the oil industry in Oklahoma will resist the consummation of the measure known as Initiative Petition 89, offered to equalize taxes in Oklahoma.

His address follows:

An examination of the statistical analysis from income tax returns known as "Statistics of Income for 1923," issued by the treasury department at Washington shows that the natural resource industries such as mining and oil production pay out a greater percentage of their profits for state and local taxes than any other line of business. The percentage of these taxes to net operating income as given by that report is so high that I hesitate to quote the figure lest it be said that there is either something wrong with the statistics or that 1923 was an unusual year. But it is a fact that industries such as mining and oil have a peculiar attraction for local taxing authorities. The occasional and somewhat spectacular success made by a few seems to give the public the impression that these industries have extraordinary tax-paying ability. The result is that in all states where mining and oil production are carried on, each session of the legislature attempts to increase the taxes upon these industries. The result is a lopsided and wholly unjust burden upon the raw materials so necessary for industrial progress.

These heavy taxes are as much a cost of doing business as are rents, salaries or wages. I think it is absurd for the tax agitators to contend that they can continue to pile these burdens onto these industries without unfavorable consequences to the public. Yet we have such an agitator in Campbell Russell, who has initiated in the state of Oklahoma a bill to increase the gross production tax on oil without consideration for the fact that oil is already paying more tax than its just share of the tax burden in that state. It is the bill known as Petition 89 and its ostensible purpose is to "equalize" the tax on oil with taxes upon other forms of property, but, of course, the real reason and purpose behind the bill is to increase the taxes on oil production regardless of equalization. In fact, equalization is not what the author wants. If it was, he would be initiating a bill to reduce the taxes on oil. The initiated measure provides that all of the ad valorem tax rates in the state, including those in the cities, shall be averaged and that instead of the 3 per cent tax which the oil producers now pay upon the gross value of the output of their wells, they will be required to pay a percentage rate equal to the average ad valorem rates as computed by county and state officials each year. The average of ad valorem rates for the fiscal year ending June 30, 1925, will be the oil rate for the fiscal year ending June 30, 1927. By including the high local levies of the cities, the author of the bill expects to increase the tax on oil from 3 per cent to around 4 per cent, or in other words, an increase of of from 25 per cent to 33 1/3 per cent over the present tax. This will mean an additional cost of producing oil of between two million and three million dollars per annum if Russell's expectations are realized.

Attempt Superficial

But the apparent attempt at equalization is superficial because it disregards the very well-known fact that the ad valorem rates are not based upon full valuation of the property assessed. Although the constitution and laws of the state of Oklahoma require property to be returned for taxation at 100 per cent of its fair cash value, it is notorious that such property is actually returned at a valuation of 50 per cent or less. If such property were really assessed at its fair cash value, an average of the ad valorem rates would be less than 30 mills or 3 per cent even with the cities included and the effect of the bill would then be to actually reduce the tax on oil. But because the law and constitution have been persistently violated for several years Russell relies upon the continuance of this condition of affairs and thus hopes to mulct the oil industry under the false name of equalization.

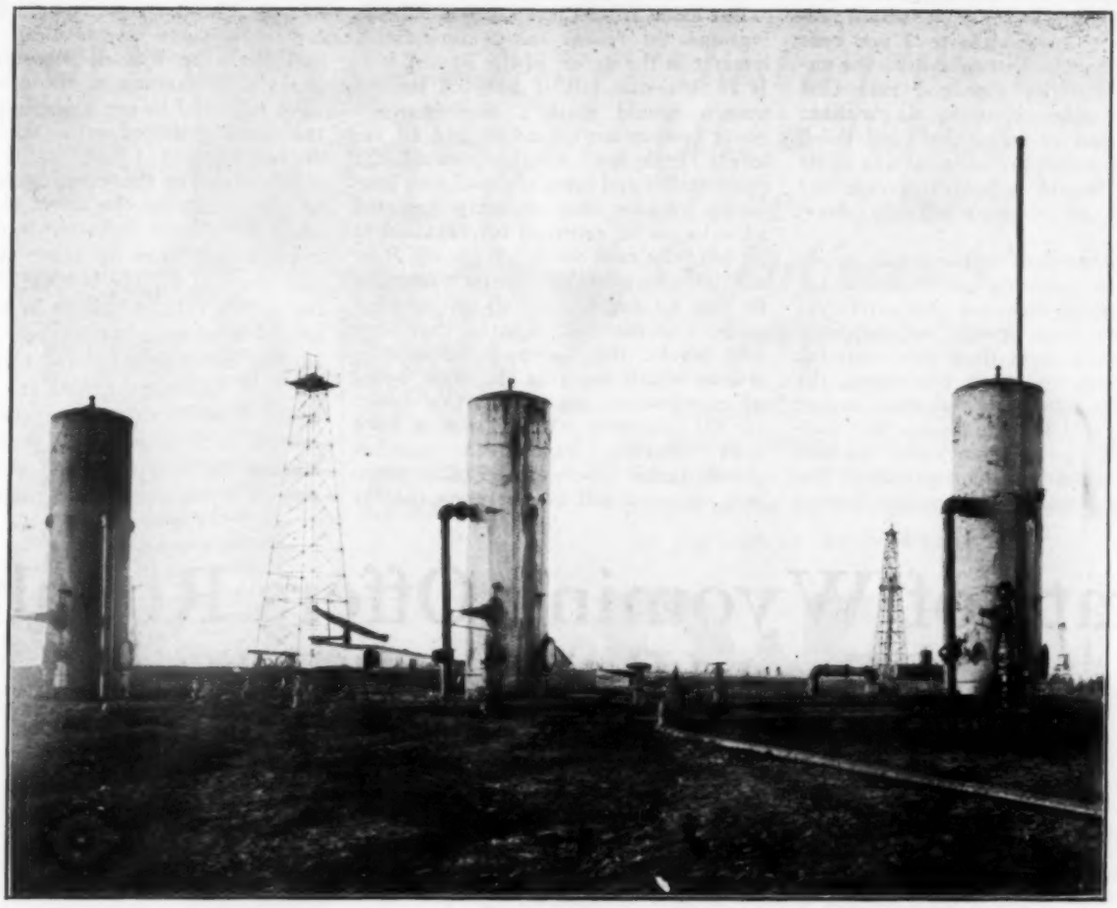
The gross production tax is utilized in Oklahoma as a substitute for the usual ad valorem tax on oil properties. The gross output of the well is taxed 3 per cent of the actual market price of the oil, and this is in lieu of any other tax on the well itself. Careful investigation reveals the fact that this tax upon a depleting asset such as an oil well is equivalent to an ad valorem levy of 3 per cent or 30 mills on the actual cash value of the oil property. Because there is such a vast difference between the amount of the gross receipts to which the tax is applied and the net operating income procurable before the well is exhausted, the sale value of an oil well will seldom exceed the gross value of the output of a given year. The significance of this is that in Oklahoma today the oil producers are paying on a 100 per cent valuation while other property owners are paying on a basis of 50 per cent or less of cash value. If real equalization is desired, these differences in valuation must be corrected because otherwise a mere comparison of rates is superficial and unjust.

Out of 60,000 oil wells now being operated in Oklahoma, over forty thousand of them are small wells with a very narrow margin of profit, if any, resulting from their operation. A very large number are being operated merely to reduce the amount of inevitable investment loss, and without hopes of a final profit. It must be conceded that an industry in this condition cannot carry a heavy gross receipts tax. The economist always points out that a tax on gross receipts is a dangerous thing, and if rates are made high it may result disastrously to the operator with a narrow margin of profit. The tax upon oil produced at a loss as well as upon oil produced at a profit.

To the casual observer a tax of 3 per cent of gross may not seem like a heavy burden, but when you consider that such a tax, because of the great difference between gross income and net income, may amount to a tax of from 25 per cent to 100 per cent of the net income, you begin to understand the possible effect of any increase.

Fight Is On

The independent oil producer in Oklahoma is going to oppose the Russell bill for three principal reasons. First,



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because there is no need for any additional revenue that the measure might yield. Second, because it would destroy the present, definite 3 per cent rate fixed by law and substitute the uncertain, indefinite averaged rate that the state officials might fix without consideration of valuations, and third, because if it met the expectations of its author it would unjustly increase the tax upon an industry already overtaxed.

The independent refiners will be interested in opposing the measure because many of them are also producers and in any event it will put additional cost burdens upon their raw material. The refiners and their customers, the automobile owners, are already paying the state of Oklahoma some five million dollars per annum upon the sale of their finished product, gasoline. The Russell bill would add another burden at the inception of the refining process —upon the raw material.

But aside from these general considerations, the refiner has a more direct interest in the defeat of the Russell bill. It is this—the bill, if adopted by the people, would start a war between gross production taxpayers and ad valorem taxpayers. As above noted, the constitution and laws of Oklahoma positively require that property assessed ad valorem be returned for taxation at its full, fair cash value. If by the Russell bill the oil producers are required to pay an average of all ad valorem rates, you can rest assured that they will invoke the law and judicial decisions which say that the state board of equalization must raise the values to 100 per cent. When this is done your refinery, casinghead gasoline plants, tanks, pipelines and other physical property will be put upon the tax rolls at a much higher figure just as the farm and the home values will be raised. The net result would be an increase in taxes assessed ad valorem and thus the Russell measure would prove a boomerang to those who may have expected to see a portion of their tax burden shifted onto the oil producers.

Reverting to the opening paragraph of this paper to the effect that these natural resource industries are already being called upon for more than their just share of the tax burden, and deeming it self-evident that it is better for all lines of business to pull together for the common good and to refuse to let a tax agitator set them at cross purposes, I invite the co-operation of the refiners in showing to the people of Oklahoma the real facts and dangers involved in this proposed legislation.

State of Wyoming Offers Royalty Oil to Highest Bidder

Probable that offer will carry bonus over Mid-Continent posted price

Casper, Wyo.—The State of Wyoming, through its land board, has announced that it will receive bids for the sale of its royalty oil in the Salt Creek field. All sealed bids for the purchase of the oil must be accompanied by a one dollar filing fee and a certified check for $25,000. The latter should be made payable to the commissioner of public lands, who will hold it as a protection to the state, in the event that the successful bidder fails to live up to the terms of the contract.

The state lands in the Salt Creek field are among the most valuable on the entire structure. Chief among the leases is the famous section 36-40-79, which is in the heart of the field and producing from at least three distinct sands. The lease comprises the entire section and more than 75 wells have been drilled on it. It will be recalled that C. N. Haskell, formerly head of the Middle States Oil Company of Oklahoma, made an unsuccessful bid for the lease. The Midwest Refining Company, present operator of the lease, is paying the state a 65 per cent royalty. This company developed the lease from the beginning and it has been the source of almost unbelievable revenue to the state. The exact production of the lease at the present time has not been made public but it probably will run above 1500 barrels per day, if allowed to produce at full capacity.

Two other leases in the field complete those owned by the state. One includes all of section 16-39-78, located in the southeastern part of the field. Another is located on section 19-40-79 and is a very small producer.

In not a single case has the operating companies been purchasing the oil from the state. The Continental Oil Company was the successful bidder for the purchase of the oil and has been paying Mid-Continent prices less 25 cents per barrel with a $1.50 minimum clause. This contract has been in effect nearly three years and will expire April 30. The crude condition has so changed during the three years that it is considered almost certain that the state will receive a bonus of 25 cents or more per barrel over posted Mid-Continent prices, rather than a similar deduction, such as was the basis of the old contract about to expire. One company has intimated that it would purchase the oil at that price.

All bids for the purchase of the oil must be in the hands of the land board by 10 a. m., March 31, 1926. The scarcity of crude in the Rocky Mountains practicallly makes it certain that the largest operators will be the keenest bidders. The crude runs about 37 gravity on an average and is very rich in gasoline content.

Drilling Record

The monthly summary of drilling operations in the Rocky Mountains during February showed fewer and larger completions, about the same number of rigs and drilling wells, practically the same initial production as during January and the ratio of completions in the various states practically the same as during January. The average initial production per well was unusually high, running well above 400 barrels daily. March is expected to show a large increase in operations all over the district. The Salt Creek field, due to the 9000 barrel completion in the Lakota sand by the Midwest Refining Company, showed a much larger initial production than for some time. The Kevin-Sunburst field completions were not as numerous as during January, but the average initial production was very nearly maintained. New Mexico and Colorado did not give up anything of importance, with the exception of a good well on the Moffat dome and the possible discovery of a small field 55 miles east of the Artesia field. Activity in Utah is growing, as might be expected in any region where a new field has been found. Operations in other Mountain states were negligible.

The Texas Production Company has definitely decided to abandon its test of the Arminto (Wyoming) structure. Its test on the southwest quarter of section 20-37-86 encountered water in the Lakota sand and the company decided that deeper drilling was too great a risk. The test was not originally begun by the Texas interests but acquired by them through a drilling agreement. A commercial flow of gas was found in one of the shallower sands, but little signs of oil were encountered.

The Midwest Refining Company has completed another large Lakota sand

(Continued on Page 54)

Send for Catalog of D+B Sucker Rods, Oil Well Pumps, Fittings and Supplies.

"Just a Little Thing Like a Thread Makes a Heap O' Difference"

says Sturdy Steve

"Some folks might think the Whitworth Thread is a small part of the D+B Sucker Rod. It is. But it is important enough to be one of the main reasons why D+B Rods are the best in the field today."

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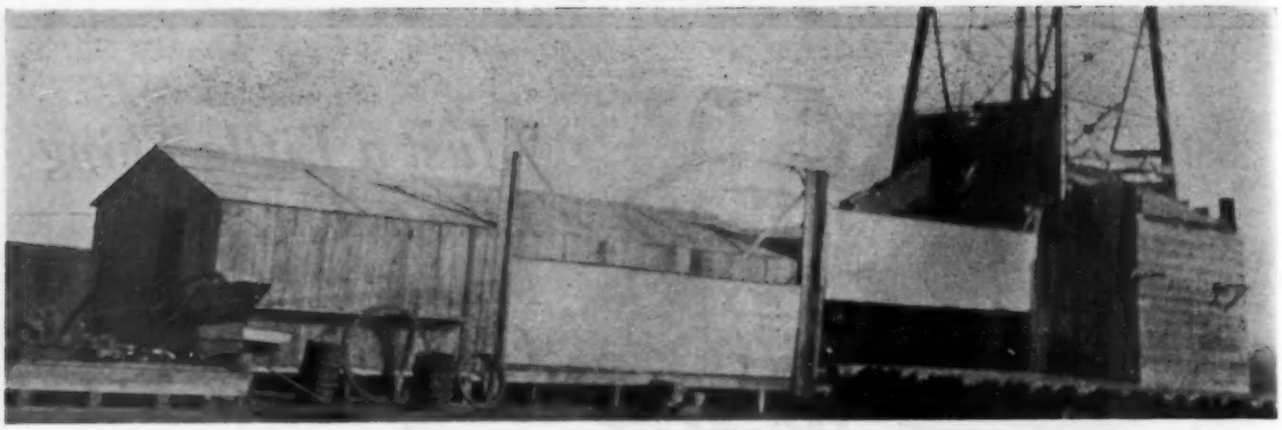


Kingwood Oil Company's outfit on the John Haynes farm, 1 mile north of Okmulgee, Oklahoma

Does Not Shut Down for Cold Weather

By Roye Munsell
Staff Representative

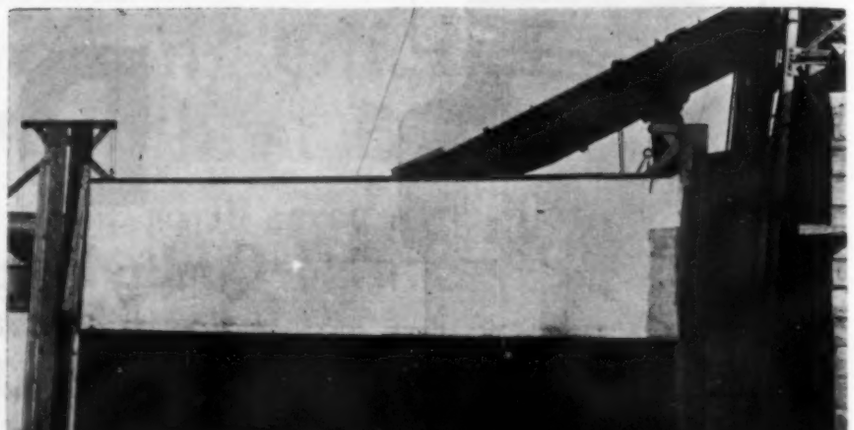
Okmulgee, Oklahoma. — Shutdowns due to inclement weather are practically unknown to the Kingwood Oil Company. During the several spells this winter when the mercury was on the hinter side of the freezing mark and scores of tests were down, their wells were drilling ahead.

In fact, not one of the Kingwood's outfits has been shut down this winter because of bad weather. The reason is not hard to find. They are prepared for winter.

The well one mile north of Okmulgee where the Kingwood Company is drilling a deep test in the northeast of the southwest of the northeast 36-14-12, Okmulgee County, on the John Haynes farm, is typical.

All of the water lines are buried and the tank protected from freezing. The engine house, walks, tool house and rig are housed in as completely as possible. A unique feature is the canvas drops which enclose the side of the rig adjoining the casing rack. These drops are fixed to slide up and down and may be raised or lowered at will. When casing is being run that panel is raised and the pipe rolled directly off the rack onto the floor of the rig. If the day is extremely cold the slide is opened only enough to allow a joint of pipe to be rolled under it.

There are days now and then during the winter when the sun shines bright and warm in Oklahoma. On these days the panels are raised and the sun shines in.



Closeup view of canvas drops used on Haynes well

Inside the rig is built a small "office" where records are kept and the horizontal labor done. Under the floor of this novel little chamber are steam coils which must add much to the comfort and joy of the scouts when the day is cold and the driving hard from one location to another.

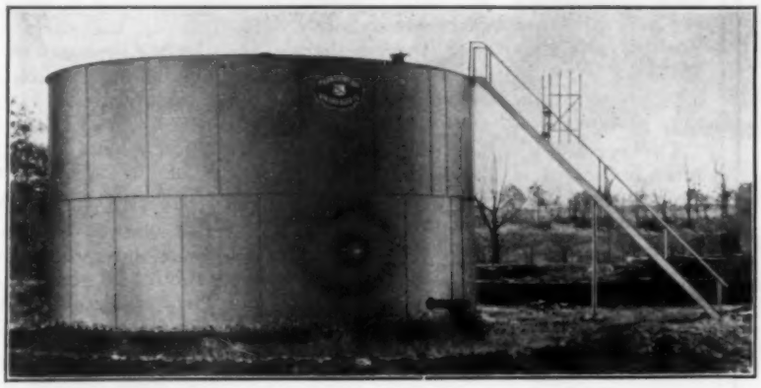
The Kingwood outfit on the Haynes test is one of the most complete in the state. A steam hammer is part of the equipment used by the tool dressers. The rig itself is made of steel and reinforced with wood. Although it has been used on several tests previous to this one, the squeaks and groans characteristic of the average derrick are (shall we say) conspicuous by their absence.

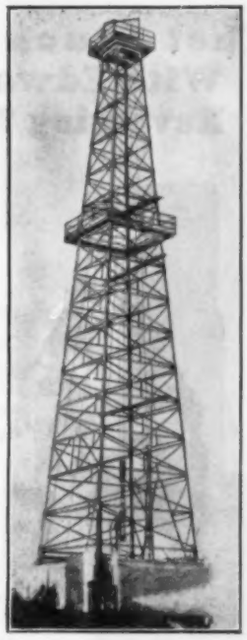
The entire structure, derrick and all, rests on a heavy concrete foundation and the usual vibration and noise is also lacking when operations are under way.

Equipment is complete, even to a rack for the fire hose. Indeed this is a model outfit.

Boiler and tool house at the Haynes Well

Parkersburg Rig & Reel Company Adopts Aluminum Paint as Standard for Steel Tanks and Derricks





THE Parkersburg Rig and Reel Company of Parkersburg, West Virginia, has standardized on Aluminum Paint. Parkersburg's customers are now protected against oil evaporation and derrick depreciation.

Parkersburg Aluminum Painted Tanks minimize evaporation by *reflecting* the sun's heat, keeping the oil *cool.* The reflecting luster lasts, for Aluminum Paint is not darkened by fumes.

Parkersburg Aluminum Painted Derricks now have a longer service life. Aluminum Paint protects them against rusting with a coat of *metallic aluminum.* Complete protection that adds years to the life of equipment.

In the selection of Aluminum Paint to protect its products, the Parkersburg Rig and Reel Company offers new evidence of its sincere desire to render superlative service to the oil industry.

The interesting story of Aluminum Paint's manifold service to oil men is told in our new illustrated booklet—"Aluminum Paint—A Step Ahead in Industrial Painting". We shall be glad to send you a copy on request.

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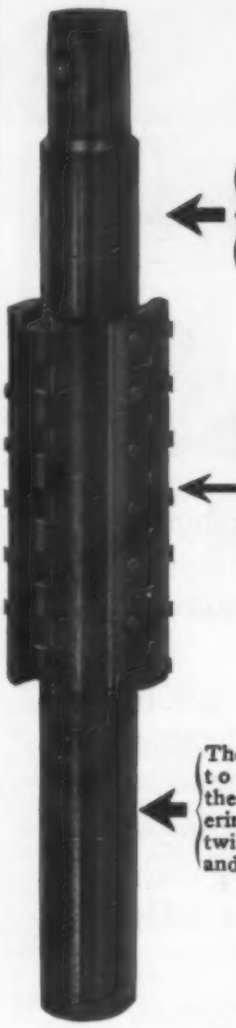
ALUMINUM IN EVERY COMMERCIAL FORM

BACK OFF

That Stuck Pipe With Edwards Reversing Tool


Coupling for drill stem connection rotates to right
Hinged wings when turned to right open and anchor to casing—causing
The lower part to operate to the left, recovering stuck or twisted off pipe and casing

Can be released at will. Will operate with strain on pipe. Has wide range of adjustment. Makes left-handed pipe unnecessary. Successful operations prove statements.

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Party Will Further Explore Oil Reserves in Alaska

A NEW search for oil in the Navy's petroleum reserve located in Arctic Alaska with explorations of the adjacent country has been announced by the Interior Department.

Gerald Fitzgerald, topographic engineer, and W. R. Smith, geologist of the Geological Survey, will make the survey and will leave Washington shortly. Both are familiar with the northern Alaska Peninsula having made several trips there to make topographic surveys and examinations for oil.

The region in which the naval reserve is located is so remote and inaccessible that only by traveling during the winter is it possible to take advantage of the brief open season when the Arctic Circle country is free from snow and rocks are exposed.

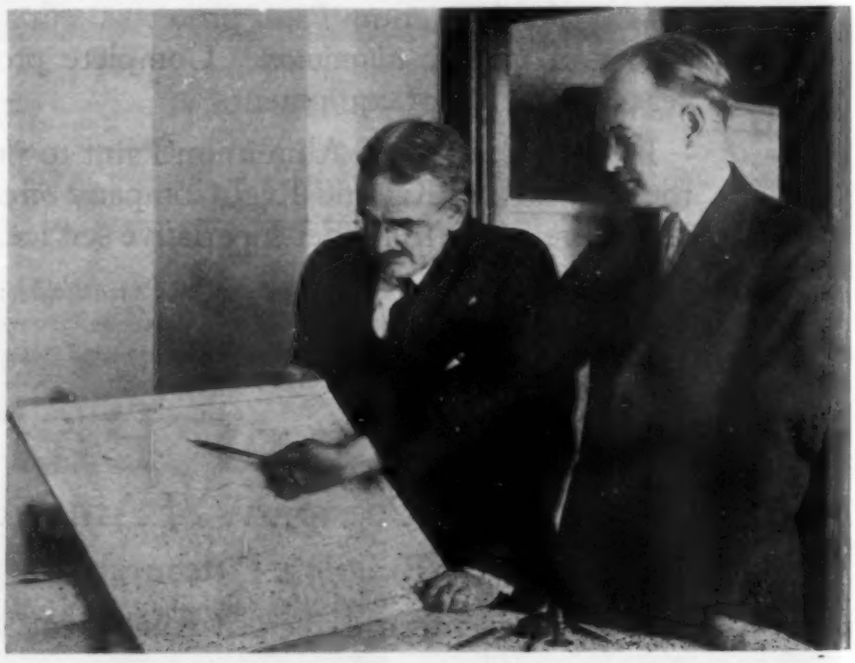
Conditions under which the work will be done are such that no specific program can be laid down far in advance. In general, however, the present plan is to go at once to Setttle, whence regular lines of transportation run to Seward, Alaska, the southern terminal of the Alaska railroad. The party will then go over the railroad to Nenana, where they will buy dog teams, and from Nenana will follow the mail route to Kotzebue. This is a run of about 700 miles and, if the party makes as good time as that of last year, will take about 27 days. At Kotzebue the party will further outfit with supplies and equipment enough to last five to six months, as after leaving the coast they will have no opportunity to obtain any additional supplies.

After leaving Kotzebue the party will work northwestward along the coast, probably as far as Kivalina, and then strike north into the hills that form the divide west at Noatak river. After a route northward through these hills has been found the party will freight its supplies ad enquipment to some point on Kokolik or Utukok river, or some other northward-flowing stream, and spend the rest of the winter surveying, geologically and topographically, as much of the adjacent region as possible, traveling with dog teams.

When the ice in the streams has broken in the spring, which in that region should be about the first of June, the party will continue the exploration by using canoes.

In this work part of the basin of Utukok river will be surveyed, and a pass to Meade river, which lies to the east, will be sought. If a suitable route can be found, the party will portage to Meade river and attempt to tie their surveys to those of the upper part of the Meade that they made last year and those of the lower part of Meade river that were made in 1923 by the Geological survey party in charge of Sidney Paige.

If a junction with the Paige surveys is made, the party will descend Meade river to a point near the coast, where short portages will bring them out at



GOVERNMENT EXPLORERS TO HUNT FOR OIL IN FAR INTERIOR OF ALASKA
W. R. Smith and W. R. Fitzgerald geologists and topograhical engineers of the U. S. Department of the Interior who are about to leave on an eight months trek into the pathless barrens of the Artic Circle to look for oil. Their explorations will be in and around the Navy's Northern Alaska oil reserve. They will travel by canoe and dog teams and depend on wild game for food.

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This team has operated with gratifying success in every well developed industry. They create new processes sometimes revolutionizing previous practices.

In the oil business, the team evolved "Petreco" Dehydrators, the electric process for breaking up the emulsion from crude petroleum. Here they did start something different and it has grown into world-wide use.

Vision is the partner who saw greater profits and waste elimination. Research (Mr. Oil Dr.) is the firm member who made the idea a reality.

"Petreco" through Vision & Research has handed producers millions of dollars increased profits, conserved hundreds of millions of barrels of crude, and solved one of the most baffling problems of the petroleum industry.

What will a "Petreco" Dehydrator do for us? Give our Oil Dr. the facts and he will tell you.

The booklet, "The Electrical Process for the Dehydration of Crude Oil Emulsions" will be sent any oil company or executive on request.

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Pump for Texas

Texas Style

NECO

When the Texas Style Neco Pump was finally completed we felt pretty sure of success because we had been widely experimenting with pumps in typical Gulf Coast service. We expected this Special Neco Pump would prove its worth but we hardly expected such rapid recognition as Texas operators have given it. Neco Texas Style Pumps are practically everywhere in service there and in many fields and by several very large companies it has, along with other Neco Pumping Equipment, been adopted exclusively.

Such wide use of Neco Pumps in Texas is traceable to the features built into them which secure exceptionally good results under the conditions. Chief among exclusive Neco features are: (1) Both valves closed at completion of down stroke—preventing gas accumulating and forming a cushion which would resist the action of rods or wire line and cause them to crowd the side of the tubing. (2) No sand or sediment remains in the barrel to cause difficulty when pumping is resumed after shut down. (3) Sanding up is prevented. (4) Cups are inverted and wear much longer.

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Northrup Equipment Co.

Parkersburg, W. Va.

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Representative

Nowata, Okla.
H. T. Torner
Representative

the head of Pearl Bay. By coasting southwestward they can reach the settlement of Wainwright, where such boats as are in these waters usually call on their way south and thus will afford a means for the party to reach Nome, where regular transportation facilities for return to the states are available.

It is believed that, as a result of these surveys, an area of 7000 to 10,000 square miles of hitherto unsurveyed country, a tract about as large as Massachusetts, will be mapped with the degree of accuracy required by reconnaissance standards, and that the major geologic features will be determined as well as the principal kinds of mineral that are likely to be found in the region. The new surveys should be of value not only in furnishing information about an almost unknown tract of country but in assisting in interpreting and supplementing the data that have been gathered in the explorations during the last three years in northern Alaska, primarily at the request of the Department of the Navy and at its expense.

Lisbon Field in Arkansas Making 1500 Barrels Daily

El Dorado, Ark.—The Marine Oil Company contributed another thrill to the excitement around Lisbon, in Union County, by bringing in a 600-barrel well on its Slaughter lease, in section 9-17-16. The well is flowing from 18 feet of pay sand at 2085 to 2103 feet. By virtue of this and other recent completions, the new Lisbon field is now yielding in excess of 1500 barrels of light oil per day, divided among the producers approximately as follows:

Marine Oil Company	600
Wingfield Syndicate	500
Rovenger Oil Corporation	350
Simms Oil Company	100
Reynolds & Marr	5
Total	1555

It is reported here that the Gulf Refining Company has purchased an 80-acre lease in the northeast quarter of section 15-17-16, of the Lisbon field.

Reynolds and associates made a test of the Blossom sand last week at 2191 feet in their Wallace No. 1, in section 27-15-19, of the new eastern extension to the Stephens field. The Louisiana Oil Refining Corporation has set eight-inch casing to test the Nacatoch sand in its Green well, located in section 22 of the same township.

Luke Weaver, scout for the Roxana Petroleum Corporation with headquarters at Lake Charles, La., was killed in an automobile accident at Beaumont, Texas, last Tuesday. He was 27 years old and married.

FRICK-REID SUPPLY COMPANY

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THE Carbic ACETYLENE APPARATUS SYSTEM

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In oil field equipment the most human organization in America

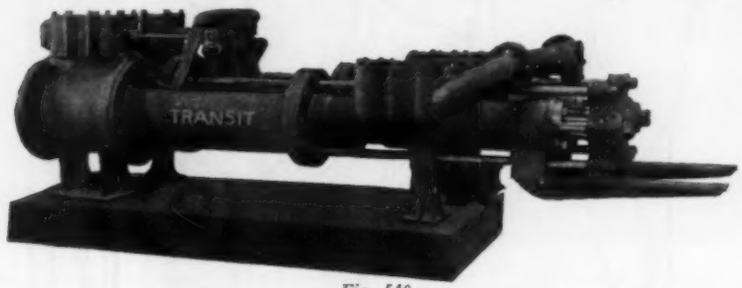

Fig. 540
18 x 5 x 18-inch Duplex Plunger End Packed Type Pump for 1000 lbs. working pressure. 375 barrels per hour.

Lagniappe in Transit Pumps

THE EXPERIENCE put into them by master builders, and the years they serve after ordinary pumps are worn out—these things in Transit Pumps are lagniappe.

Transit prices are strictly competitive, but Transit Quality is the despair of competition everywhere.

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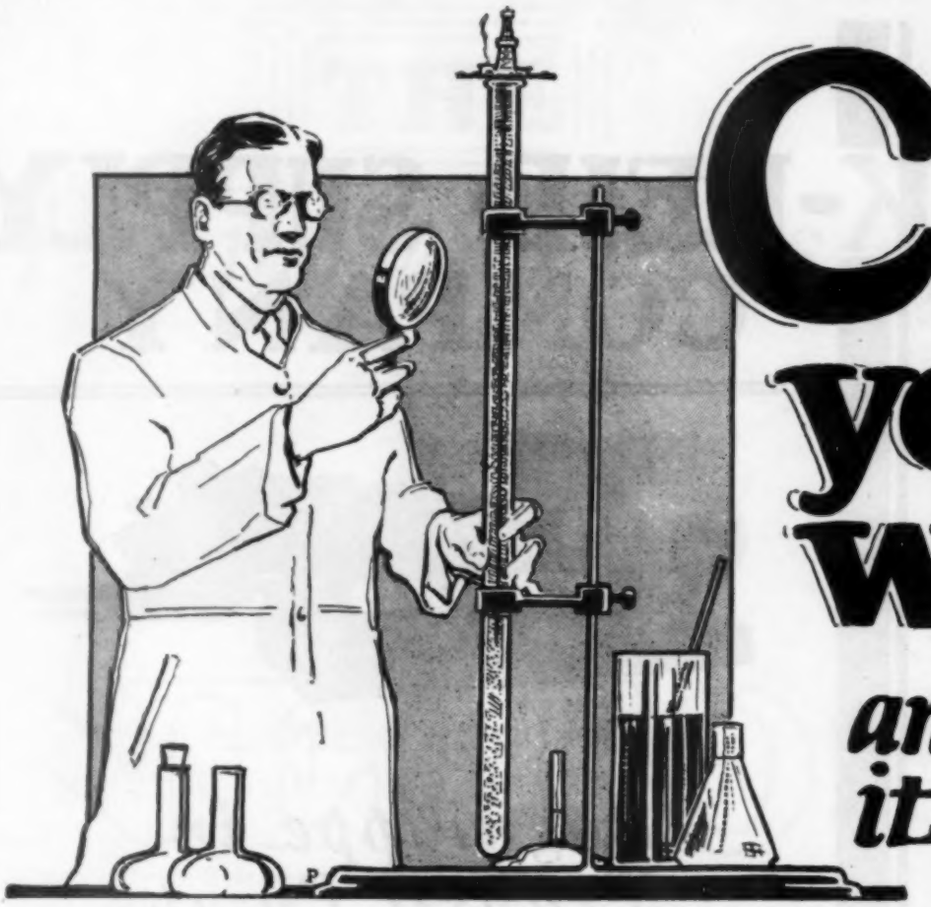

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PERSONAL MENTION-MEN YOU KNOW

Dean Frank H. Probert of the College of Mining of the University of California has returned from a trip to the East, where he attended the annual conference of the A. I. M. M. E. in New York City, and also the conference of the U. S. Bureau of Mines, held in Washington Feb. 15-18.

Robert W. McDowell, formerly assistant sales manager, has recently left the service of the Producers and Refiners Corporation. As yet Mr. McDowell has not announced his plans for the future but in the meantime has returned to Tulsa to take up his residence there for the present.

T. M. Banks, who for the past two years has been with the Texas Geological Survey, has recently become a member of the geological department of Vacuum Oil Company under Dilworth Hager in the Houston office. Mr. Banks is a graduate of the University of Texas geological department of 1923.

T. C. Moss was appointed February 15 by the General American Tank Car Corporation, Chicago, as a company representative in the South. Mr. Moss will maintain an office in the Magnolia Building, Dallas.

DILWORTH HAGER

who resigned as geologist for the Gulf in charge of District 2 in Texas to go with the Vacuum early this year to reorganize the geological department of this company, which is steadily growing in production in the Gulf Coast. Mr. Hager is known throughout the country in geological circles. He, together with John Blanchard, is credited with opening Lytton Springs field.

S. L. Mason, formerly sub-surface geologist for Rycade Oil Corporation, Houston, now holds that position with the Turkish Petroleum Company with headquarters at Bagdad in the Near East. Mason, standing on the right, is having "tiffon," the noon-day meal, with some Assyrian Sheiks, near Shargat.

Lee Wilson, president of the Eureka Drilling Company of Wichita Falls and W. M. Lourcey, member of the land department of the Gulf Production Company in the North Texas district, departed last week for a visit to Florida. Lourcey will visit with his parents in Florida while recuperating from an attack of the flu.

John Crotty, president of the Republic Supply Company, Houston, made a business trip through the North Texas territory last week.

George Bowers, formerly with the Pierce Petroleum Corporation and more recently with the Panhandle Refining Company, has moved to Dallas to take charge of the bulk and service stations of the Simms Oil Company in Texas.

Levi Smith, president of the Big Lake Oil Company, returned to the company's headquarters in the the Big Lake field, (Texas), early this week after an absence of nearly one month, and will divide his time in the future between the Pittsburgh, Pa., and Big Lake offices of the company.

M. F. Waters of Tulsa, general manager of the Smith Separator Company, is playing host to all his friends this week announcing the arrival of a son and heir, Darst Eugene Waters. A lusty 7½-pound boy, Darst Eugene already has been duly appointed assistant general manager of the Smith Separator Company and says that before long he is going to have M. F.'s position.

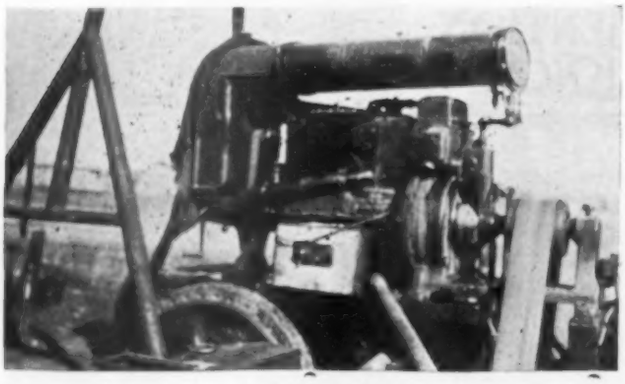
Gulf Coast Oil Men Will Dine Texas Commission

Houston, Texas.—Members of the Texas Railroad Commission, which is in charge of oil and gas conservation in Texas, accompanied by the Chief Supervisor of the Oil & Gas Conservation Division of the commission will be the guests of Gulf Coast oil men at a dinner to be held at the Rice Hotel in Houston on the evening of March 18.

A committee consisting of R. L. Dudley, chairman, Dan Harrison, Cook Wilson, G. L. Noble, Walter Pyron, W. S. Farish, Mills Bennett, Harry C. Hanszen, T. P. Lee, McDonald Meachum and E. H. Buckner will be in charge of the dinner to which all oil men in Texas, and especially the Gulf Coast, have been invited. Reservations can be made by writing or phoning R. L. Dudley, care The OIL WEEKLY, Preston No. 158, Houston.

Harry B. Baker, formerly scout for the Mid-West Exploration Company, has joined the scouting force of the Marland Oil Company of Texas, and is located in the Cisco shallow district in Central West Texas.

T. J. Fitch, acting manager of the Magnolia Pipe Line Company with headquarters at Dallas, departed last week for Carnegie, Pennsylvania, to attend the funeral of his father W. J. Fitch, 85, who died suddenly. Burial was made at Wilkesbarre, Pennsylvania.



Close up view showing adaptation of Fordson tractor power unit to the portable pipe machine

The pipe threading machine, W. M. Walker operator and Payden Hills, helper

Portable Pipe Machine Reclaims Tubular Goods for Pure Oil

THE Pure Oil Company has recently placed into service a portable pipe machine to be used on its operating properties. Instead of bringing tubular goods to a pipe machine at some warehouse or shop to be reworked, and then carried back, the pipe machine, with this outfit, is moved there and the work done on the spot.

Two men, an operator and a helper, are permanently attached to the machine and they keep it continually on the move from one job to another.

The Pure Oil Company has a pipe inspector who inspects each piece of pipe as it is taken out of service and grades it according to whether it is fit for further use without repair, or needs to be sent to a pipe shop, or is valueless except for junk. The three grades are then separated and placed into three separate groups.

With this system the condition of second hand pipe stock on any property is always known and when the portable pipe machine moves in no time is lost in getting started and finishing the job.

The pipe machine, an eight-inch Landis, is complete in every detail for handling line pipe, casing and tubing. Besides the necessary pipe dies, it has a reaming device and cutting off tools, and is further equipped to take off and put on collars, recessed or plain. Among other equipment is a power grinder for grinding tools.

The power for driving the pipe machine is furnished by the well-known Fordson tractor power unit. The mounting of both on a heavy, rubber-tired, Highway trailer makes the outfit nothing short of a complete pipe shop-on-wheels that can be moved about from place to place for salvaging old pipe and handling new stock.

Made in Own Shop

The outfit was designed by the Pure Oil Company's men and this particular machine was built and assembled in the Columbus Shop, Columbus, Ohio.

The design of the trailer was altered slightly to allow the pipe machine to be placed nearer the ground. Power from the tractor engine is transmitted to the pipe machine by the way of belts and a shaft running along the side of the machine. The grinder is driven from a pulley on this shaft arrangement.

On the operating side of the machine is a platform for the operator. The engine throttle and gear shifting mechanism are conveniently located on that side and the engine is controlled without trouble from the operator's position at the pipe machine.

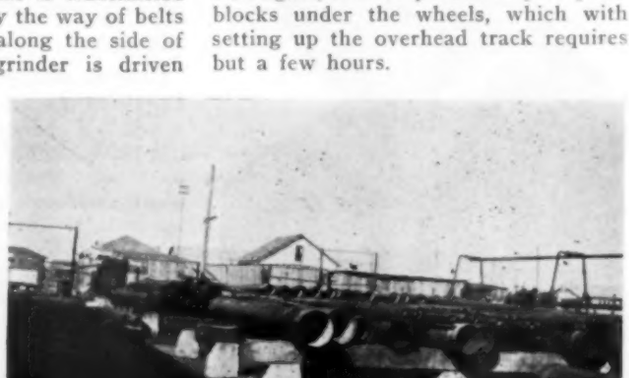
At the rear of the machine is placed another platform which makes the pipe machine quite as accessible to the operator as though it were placed in a shop.

As part of the equipment for handling pipe is an over head track on which travels a chain hoist. This track is sufficiently long to allow pipe to be handled from several racks. This piece of equipment is made into handy sections and is quickly taken down and moved with the machine.

The whole outfit, machine and overhead track, is readily portable. Only a motor truck is necessary to transport it from one place to another.

To prepare the machine for operation again, it is only necessary to place blocks under the wheels, which with setting up the overhead track requires but a few hours.

Helper placing a piece of pipe into the machine unaided



Partial view of pipe yard at the Okmu'gee warehouse of the Pure Oil Company. The machine is in the background. The overhead track and traveling hoist makes every piece of pipe available without moving the machine

There Are No Unimportant Details About Fish Tail Bits

(Continued from page 33.)

colder steel was laid over the couple in the furnace, the furnace immediately cooled to 750 F., at B. Temperature of furnace and steel then rose, until at C, equilibrium was established, when temperature of both furnace and steel rose uniformly.

At D, heat was required within the steel for internal chemical changes in composition and structure and, as the chart continued its passage under the temperature recording needle, a hump formed in the record. The delay in rise of sensible temperature lasted for nearly five minutes, when the steel again commenced to rise in temperature.

In order to duplicate the physical characteristics of a steel heated for hardening with this method, all that is necessary is to quench within the temperature from D to E.

The exception is however that steel must be quenched between these temperatures on a rising heat only, which may be explained. When steel is heated to that point of fusion of carbon—the lower limit of the critical point—fusion is delayed and incomplete unless temperature is carried some higher to effect complete fusion, and no higher. Fusion, or the critical point range, is completed when the steel begins to rise again in temperature. Heating above the critical range sets up additions chemical changes that make the steel brittle and dry.

When quenched at temperatures within the critical range, steel assumes the velvety grain required; when heated to higher temperatures, brittleness is set up. It has been found that heating to above critical temperature, then cooling to the critical temperature again, and quenching, fixes the structure to correspond to the upper temperature, and not to the temperature of quenching. For example, an 80 carbon steel, with critical range of 1450 to 1500 F. When quenched between these temperatures the steel takes on its maximum hardness and toughness. But when heated to 1600 F. and quenched, the structure is brittle and, further, when heated to 1600 F., then cooled again to 1500 F., and quenched it will be found to take on the same structural defects as when heated to 1600 F. and then quenched. Hence the maxim, quench on a rising heat.

The hump method is especially suited where the steels are handled in variety because the hump always locates the correct hardening temperature.

Inaccuracy of Color

When heating steel using this method, or to be exact, any method whatever of heating, time must be allowed for steel to become homogeneous at critical temperature. It is therefore necessary that heating not be too fast. And also, to avoid distortion and heating cracks, sufficient time must be allowed for steel to heat uniformly throughout for not only can heating cracks develop on the exterior, but also on the interior of the blade of a bit.

It is not humanly possible to estimate temperatures exactly, from color, in a furnace, or out of the furnace. When the steel and furnace are heated up to orange colors, and higher, the steel becomes invisible, or to express it better, steel is so much the color of the furnace that the steel cannot be seen, hence furnace colors—the lining—may be used for estimating colors instead of steel itself, leading to inaccuracy.

Colors and the gradients of different colors are relative in intensity to sunlight; in darkness a dull red can be seen in steel that appears black in sunlight. And where no pyrometric control is used, and a shop is poorly lighted, bits are usually under heated, while bits sharpened out in the sun are sure to be over heated.

In a shop, the heats used on a bright sunny day will be found greater than the heats used on cloudy, dark days.

The percentage of carbon in tool steel controls the critical temperature in a reverse ratio, as shown below:

Carbon Content	Critical Temperature
1.00	1430 F.-1470 F.
.90	1445 F.-1475 F.
.80	1450 F.-1525 F.
.70	1460 F.-1535 F.
.60	1475 F.-1550 F.

All these temperatures show some shade of cherry red. Forging temperatures average one hundred and twenty-five degrees higher and annealing temperatures range between 1400 F. and 1425 F.

Thus, three distinct temperatures are required for treating steel; forging temperatures range from bright red to salmon red colors; annealing after forging, at a low cherry red, while for hardening full and bright cherry red is necessary, depending upon the carbon content.

These graduations are difficult to obtain by color, even should the smith know just what the carbon content is.

Every engineer knows that steel is not homogeneous, but not much is ever said about it. A close study of homogeneity and the causes of segregation by certain manufacturers have led to definitely better steels of the same composition and further, the study of occluded gas, blow holes, pipes and other causes of segregation in the ingot as well as the purifying effect of some of the alloys that secure homogeneity have been the means of improvement in the steels we have today.

When an ingot is poured into the mould and cooled, it is not homogeneous throughout. Its structure is coarsely crystalline, and the crystals do not always have a firm hold upon one another, there are pipes in the upper portion, shrinkage cracks extend from the surface toward the center, but when the ingot is heated and rolled most of these defects disappear. The pipes and blow holes are forced together and usually welded, the crystals are forced more closely together and with careful inspection, steel reaches us in as nearly homogeneous state as can be set up by the manufacturer.

To Be Continued

State Sues Humble Company Again

Austin, Texas.—Due to irregularities claimed by the State of Texas in the perfecting of the title to lands on Hog Island, a section of the productive area of Goose Creek field, suit for $1,000,000 was entered March 9 by Assistant Attorney General R. J. Randolph for the state against the Humble Oil & Refining Company and John Gaillard.

The petition for suit filed by the State holds that the late Asbel Smith, owner of some of the lands on the island, failed to perfect the patent on the land and that the defendants unlawfully entered the land and withhold possession from the state. The petition also declares that the islands were not subject to being patented at the time the grant was made, that the patent is void because the survey was not made in accordance with the law and that there was no evidence in the land office of the state as to the surveys.

Arch "Sharpshooter" Murrel, Vacuum Oil Company scout in the Laredo District, displays one of his good catches. Besides keeping up to the minute on development in his territory Arch spends some of his time chasing big game along the Rio Grande

Torsion Balance Catalog

L. Oertling, Ltd., Turnmill Street, London, E. C. 1, announces a new catalog describing the Eotvos Torsion Balance. A number of improvements have been made in the balance, all of which are given in detail in the new catalog.

Copies can be obtained on request to the company.

State of Wyoming Offers Royalty Oil to Highest Bidder

(Continued from page 42.)

well on the southeast quarter of section 26-40-79, Salt Creek field. The sand was reached at approximately 2400 feet and the well flowed 2000 barrels after completion. The Lakota sand well completed two weeks ago by this company is not being produced at capacity. It is rated as the second largest well ever completed in the Salt Creek field, having flowed at the rate of more than 9000 barrels daily.

All leases, equipment and houses of the California Oil Company in the Poison Spider field will be sold at public auction, March 17, 1926, by the receiver of the company. The leases consist of 540 acres, a large part of which has been proven for black oil. Four wells have been drilled to the producing sand and they have a total production of about 150 barrels daily. Much of its most valuable acreage has not been drilled, it is thought. The company formerly operated one of the most modern camps in the state. The poor market for black oil was the chief contributing factor to the company's failure.

Shale Development

Declaring before the oil conservation board at Washington that shale oil could be produced for one dollar per barrel, K. C. Schuyler, formerly a director of the Midwest Refining Company, seems to have started a controversy which may not be definitely settled until the government can see for themselves just what it costs to produce shale oil under various circumstances. At present, the government is building an experimental shale plant in Colorado to test the possibilities of the shales. Many experts have taken issue with Mr. Schuyler as to the relative cost of producing shale oil as compared with other oils. The exponents of shale production even claim that shale oil can be produced at less than one dollar per barrel, while the majority of geologists contend that it can not be recovered at anywhere near that cost. The location, quality and quantity of the shale probably would determine the cost of recovering the oil, experts agree.

The discovery recently made on the Rattlesnake (New Mexico) dome by the Continental Oil Company indicates that the third producing sand may extend over a much greater area than either of the shallower formations. The well completed as a producer on the southeast quarter of section 2-29-19 was productive only in the third or deepest sand. The well originally was started to test the producing limits of the structure. The first and second sands were water-bearing but the third carried oil. This fact means that other wells producing from the shallower sands in the center of the field may also be productive in the third sand.

The Salt Creek Producers Association, subsidiary of the Midwest Refining Company, has completed a 5000 barrel well on the northeast quarter of section 2-39-79, Salt Creek field. The newest producer was completed at a total depth of 2532 feet and is the farthest south of all the Lakota sand wells yet completed. The size of the well indicates that this formation may extend much farther to the south and west than originally thought.

The Ohio Oil Company has abandoned its deep test near the Artesia field, section 34-21-26, at 5805 feet. This well was by far the deepest drilled in the state. Small signs of production were noticed but no immediate formation was accessible when the well was abandoned, it was thought.

Completions Stimulate Drilling in Brown County

Cisco, Texas.—An incipient boom in the Blake area of northern Brown County, three and one-half miles northeast of the Cross Cut field and about four and one-half miles southeast of the Pioneer field, in Eastland County, received considerable impetus last week by the completion of two 350-barrel wells located on the Dunn and Allen farms, in the Juan Delgado Survey. "Cowboy" Evans and associates, of Cisco, brought in their Dunn No. 2 on Wednesday with an initial flow of 350 barrels per day, by heads, from a sandy formation encountered at a total depth of approximately 1,100 feet. The States Oil Corporation and others followed suit on Thursday by the completion of a well of similar calibre at slightly shallower depth on the Jim Allen farm, indirectly offsetting the Dunn tract on the northwest.

The States Oil Corporation, Humble Oil & Refining Company, The Texas Company, and other owners of close-in acreage are now operating fourteen Fort Worth spudding machines in the new Blake shallow field, where a production of approximately 1,065 barrels of oil per day, as shown below, has been developed from five completed wells. It is considered likely that a dozen or more new wells may be spudded in this week.

Present Production, Blake Field

"Cowboy" Evans et al, 2 wells....	550
States Oil Corp., 1 well.....	350
Humble Oil & Ref. Co., 2 wells ..	165
Total	1065

This development follows the completion several weeks ago of the Humble Oil & Refining Company's Stover oil well, about three-quarters of a mile southwest from the northeast corner of the Delgado Survey, and of the States Oil Corporation's Allen gasser, drilled near the center of the northeast quarter of the survey. The Blake oil tests around 43°, being a typical light green North Texas crude. It is worth at present posting, around $2.60 per barrel, depending on gravity variations. As the wells are shallow, drilling can be done by tractor-driven spudders at an average cost of around $5,000.00 each. For this reason, it is probable that the development campaign will be hurried to completion. The only pumping well in the new field is being operated by standard rig; but it is believed that central pumping powers and jacks will be installed as soon as development has progressed sufficiently and when the wells cease flowing.

The old Cross Cut field is also the scene of a revival of activity, following the completion last month of an 800-barrel well drilled by J. S. Cosden on the Westerman property, near the northern edge of the field and about a half mile east of the town of Cross Cut. The well was made with a National drilling machine, which has been moved to another location on the same lease.

Pete Hoffman's Kilgore extension, located on the H. M. McClure Survey, about two miles northeast of the nearest production in the Cross Cut field, is yielding 20 barrels of pipe line oil, per day, on the beam, from 26 feet of sand at a total depth of 1296 feet. Currie and others are rigging up an Armstrong machine to offset the Hoffman well on the west; and it is said that the redoubtable Pete is planning to drill another well, probably on the Armstrong property, Curlong Survey, at a location about one mile south of his Kilgore well.

The Humble Oil & Refining Company has already extended its pipe line to the new wells, and the Texas and Prairie pipe line companies are both laying extensions into the field. The Prairie is laying eighteen miles of pipe, of which half is six-inch and half is four-inch, in a southwesterly direction from Pioneer. The Texas Pipe Line Company is laying three miles of four-inch and three miles of three-inch, also from Pioneer.

Offices Moved

Tulsa, Okla.—Offices of the Sun Oil Company and the Twin State Oil Company have been moved to the Petroleum building. Formerly these affiliated concerns were housed in their own building at Sixth and Cheyenne Streets. These quarters became too small. Two floors of the Petroleum building have been taken.

AVERAGE DAILY PRODUCTION FOR U.S.

Texas

NORTH TEXAS

	Feb. 27	March 6
Burkburnett	12,350	12,400
Electra	16,300	16,350
Iowa Park and K-M-A	5,500	5,550
Wilbarger	11,400	11,650
Panhandle	5,600	6,200
Petrolia	300	300
Archer County	27,300	27,800
Others	900	900
Total	79,700	81,150

EAST CENTRAL TEXAS

Mexia	13,350	13,450
Currie	1,100	1,100
Richland	2,300	2,300
Corsicana-Powell	32,600	32,800
Wortham	10,800	11,200
Total	60,150	60,850

WEST CENTRAL TEXAS

Stephens County	12,750	12,750
Eastland County	5,900	5,900
Desdemona	2,050	2,100
Young County	8,250	8,400
Palo Pinto County	400	400
Callahan County	4,500	4,450
Shackelford County	2,600	2,700
Reagan County	31,300	31,600
Others	5,300	9,400
Totals	73,050	77,000

SOUTHWEST TEXAS

Luling	21,600	21,800
Mirando	5,700	5,700
Somerset	2,300	2,300
Lytton Springs	7,250	7,400
Others	800	750
Total	37,650	37,950
Texas tot'l outside Gulf Coast	250,550	256,950

GULF COAST

Goose Creek	9,600	9,600
Hull	15,250	15,300
Saratoga	1,300	1,300
Blue Ridge	800	750
Damon Mound	1,050	1,000
Batson	1,100	1,100
West Columbia	9,200	9,400
Humble	4,900	4,850
Pierce Junction	1,050	1,100
Sour Lake	4,500	4,150
Spindletop	2,850	2,700
Orange County	11,850	11,500
Edgerly	1,150	1,150
Evangeline	1,100	1,100
Vinton	6,600	6,700
Lockport	1,650	1,700
South Liberty	7,750	7,800
Big Creek	1,400	1,400
Boling	8,800	6,550
Piedras Pintas	1,250	450
Others	1,700	1,700
Totals	984,850	91,300

North Louisiana

Homer	5,900	5,800
Haynesville	10,350	10,350
Caddo Light	9,100	9,000
Caddo Heavy	2,300	2,200
De Soto-Red River	3,800	4,100
Elm Grove	550	700
Bellevue	2,300	2,300
Cotton Valley	8,250	8,400
Urania	5,600	6 600
Total	48,150	49,450

California

Santa Fe Springs	48,000	48,000
Long Beach	112,000	110,500
Huntington Beach	44,500	45,000
Torrance	28,000	28,000
Dominguez	23,000	21,500
Rosecrans	22,000	21,500
Inglewood	53,500	52,500
Midway-Sunset	92,000	92,000
Others	180,000	180,000
Total	603,000	599,000

Oklahoma

	Feb. 27	March 6
North Braman	2,150	2,150
South Braman	8,150	9,050
Blackwell	3,250	3,150
Hubbard	2,000	1,850
Thomas	8,600	7,450
Tonkawa	44,250	44,400
Garber	26,350	25,100
Burbank	44,500	44,300
Osage (Outside Burbank)	32,200	33,100
Watchorn	2,800	2,650
Cushing	22,500	22,550
Yale Jennings	15,650	16,250
Davenport	21,150	21,050
Bristow-Slick	31,850	31,700
North Okmulgee	18,400	18,300
Lyons-Deaner	4,350	4,300
Stroud	2,850	2,600
Cromwell	19,700	19,300
Papoose	14,250	13,800
Wewoka	17,250	16,850
Duncan District	7,600	7,650
Graham	9,300	9,400
Fox	3,750	3,800
Healdton	15,000	14,950
Hewitt	12,300	12,250
Others	64,250	65,200
Total	455,400	453,150

Arkansas

El Dorado	7,700	7,600
Smackover Light	18,950	18,700
Smackover Heavy	137,250	133,300
Stephens	1,500	1,500
Nevada	1,600	1,600
Lisbon	....	1,200
Total	167,000	163,900

Kansas

Florence-Covert	1,800	1,800
Peabody-Ebling	4,650	4,550
Eldorado-Towanda	14,150	14,200
Augusta-Fox Bush	5,000	5,000
Rainbow Bend	5,100	4,850
Russell	5,100	5,550
Greenwood County	41,500	42,000
Others	25,950	26,000
Total	103,250	103,950

Mountain States

WYOMING

Salt Creek	57,100	55,050
Grass Creek	2,750	2,800
Elk Basin	650	700
Big Muddy	3,350	3,300
Lost Soldier	4,250	3,950
Rock River	3,100	3,150
Teapot Dome	1,150	1,500
Others	4,650	5,650
Total	77,000	75,050

MONTANA

Cat Creek	3,050	3,050
Sunburst	15,200	15,000
Total	18,250	18,050

COLORADO

Moffats (Craig)	3,450	3,800
Fort Collins	2,700	2,350
Florence	400	400
Others	450	400
Total	7,000	6,900

NEW MEXICO

Artesia	3 300	3,000
Hogback	500	500
Rattlesnake	300	350
Total	4,100	3,850
Total Rocky Mountains	106,300	103,850

EASTERN

	Feb. 27	March 6
Including Ill., Ind., Ky., Pa., Ohio, W. Va., and N. Y.)	98,500	98,000

PRODUCTION SUMMARY

East of Rockies	1,218,000	1,216,700
United States	1,927,300	1,919,550

President's Board Asks Extension of Time

Washington, D. C.—Continuation of the Federal Oil Conservation Board for a time, at least, after June 30, is desired by President Coolidge, and the Budget Bureau has accordingly transmitted to Congress a recommendation that the unexpended portion of the original appropriation of $50,000 should be made available for use after that date.

Under the terms of the act making the $50,000 appropriation, any unexpended funds were to be returned to the Treasury on June 30, which would automatically terminate the life of the organization. It is indicated now that the board cannot complete its work by that date and that additional time will be required to make the three voluminous reports which are now planned.

So far, the board has been able to operate without expenditure by the part-time use of men already on the Government payroll. The work has now reached a point where money must be spent in order to carry out its program. Originally, it was planned to cover the situation in one report, but a number of unforeseen phases have been injected into the inquiry, which will make it necessary greatly to expand the report and to divide it into three sections.

The first report will be made to the President, probably early in May, and will consider domestic conditions, production, refining, consumption, legal stipulations, state and national; and development of government and private lands.

This will be followed by a report dealing with the foreign oil situation as it relates to American interests, including the potential oil resources of foreign fields, conditions, and the steps that the Government should take in encouraging and supporting Americans in foreign fields. These questions, it is felt by officials of the oil board, are paramount and should be given full consideration.

The third report will consider possible sibstitutes, the possible development of the oil shale industry, and whether other mineral substances can be substituted for oil and oil products for fuel uses. The board intends to make a very comprehensive survey of the shale situation, with a view to gathering data regarding mining costs, quality of oil produced, and the various elements entering into shale oil production.

THE SINCLAIR trade-mark does more than identify oils of quality.

It symbolizes the ideals of our Company. It represents our ambition to co-operate with Sinclair dealers to attain mutual growth.

Sinclair dealers know that it also represents our obligation to maintain their prestige with a product as conscientious as their service.

We stay behind the obligation — and the trade mark guarantee: —

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SINCLAIR REFINING COMPANY

NEW YORK
Sinclair Oil Bldg., 45 Nassau St.
Telephone: Rector 9320

CHICAGO
22nd and Rockwell Streets
Telephone: Crawford 2000

Cable Address: "Lucent"

SINCLAIR OILS

CRUDE OIL PRICE QUOTATIONS

Crude Price Changes

March 3.—Effective at the opening of the market today the Ohio Oil Company posted an advance of 10 cents on Wooster Crude, making the price $2.35 per barrel.

March 8.—Effective at the opening of the market today the Joseph Seep Purchasing Agency posted reductions of 25 cents per barrel on New York Transit, Bradford District, National Transit, and Southwest crudes, and a 35 cent reduction on Macksburg.

March 9.—Effective at the opening of the market today the Standard Oil Company of Louisiana posted a 15 cent reduction in the price of Bellevue crude. This cut was met by the Louisiana Oil Refining Corporation and the Gulf Refining Company.

Current Postings

CALIFORNIA

Kern River, Wheeler Ridge, McKittrick, Lost Hills, Coalinga, Newhall, Midway, Sunset, Elk Hills

	March 10 1926
14 to 19.9 gravity	.75

La Habra, Whittier

14 to 19.9 gravity	.85
20 gravity	.87
21 gravity	.89
22 gravity	.91

Montebello

14 to 19.9 gravity	.85
20 gravity	.87
21 gravity	.89
22 gravity	.91
23 gravity	.94
24 gravity	.97
25 gravity	1.01
27 gravity	1.04
28 gravity	1.07
29 gravity	1.10
30 gravity	1.13

***Torrance, Richfield, Inglewood, Brea, Olinda, Signal Hill, Huntington Beach**

14 gravity	.85
15 gravity	.87
16 gravity	.90
17 gravity	.94
18 gravity	.98
19 gravity	1.02
20 gravity	1.06
21 gravity	1.10
22 gravity	1.14
23 gravity	1.18
24 gravity	1.22
25 gravity	1.26
26 gravity	1.30
27 gravity	1.34
28 gravity	1.38
29 gravity	1.42
30 gravity	1.46
31 gravity	1.52

*Inglewood and Torrance follow this posting through 28 degrees only.

Lost Hills, Midway, Sunset, Elk Hills

14 to 19.9 gravity	.75
20 gravity	.79
21 gravity	.84
22 gravity	.92
23 gravity	1.00
24 gravity	1.08
25 gravity	1.16
26 gravity	1.24
27 gravity	1.32
28 gravity	1.40
29 gravity	1.48
30 gravity	1.56
31 gravity	1.64
32 gravity	1.72
33 gravity	1.80
34 gravity	1.88

Coalinga, Wheeler Ridge

20 gravity	.91
21 gravity	.92
22 gravity	.93
23 gravity	.95

Wheeler Ridge

14 to 19.9 gravity	.75
20 gravity	.78
21 gravity	.81
22 gravity	.84

	March 10 1926
23 gravity	.87
24 gravity	.90
25 gravity	.93
26 gravity	.97
27 gravity	1.00

Coalinga

14 to 19.9 gravity	.75
20 gravity	.79
21 gravity	.84
22 gravity	.89
23 gravity	.94
24 gravity	.99
25 gravity	1.04
26 gravity	1.09
27 gravity	1.14
28 gravity	1.19
29 gravity	1.24
30 gravity	1.29
31 gravity	1.34
32 gravity	1.39
33 gravity	1.44
34 gravity	1.49
35 gravity	1.54

Signal Hill

31 gravity	1.52

Coyote Hills

14 to 19.9 gravity	.85
20 gravity	.88
21 gravity	.94
22 gravity	1.00
23 gravity	1.06
24 gravity	1.10
25 gravity	1.16
26 gravity	1.24
27 gravity	1.30
28 gravity	1.36
29 gravity	1.42
30 gravity	1.48

Santa Fe Springs

24 gravity	.97
25 gravity	1.05
26 gravity	1.13
27 gravity	1.21
28 gravity	1.28
29 gravity	1.34
30 gravity	1.40
31 gravity	1.46
32 gravity	1.52
33 gravity	1.60
34 gravity	1.68
35 gravity	1.76
36 gravity	1.84
37 gravity	1.93
38 gravity	2.00

Rosecrans, Dominguez

26 gravity	1.30
27 gravity	1.34
27 gravity	1.38
28 gravity	1.42
29 gravity	1.46
30 gravity	1.50
31 gravity	1.52
32 gravity	1.52
33 gravity	1.64
34 gravity	1.70
35 gravity	1.76
36 gravity	1.84
37 gravity	1.92
38 gravity	2.00
39 gravity	2.08
40 gravity	2.16
41 gravity	2.24
42 gravity	2.30

Fuel Oil

Richmond	1.04
El Segundo	1.00
San Pedro	1.00

EASTERN STATES

New York Transit	3.65
Bradford District	3.65
National Transit	3.55
Southwest	3.55
Eureka	3.50
Macksburg	3.30
Gains	2.95
Somerset medium	2.30
Somerset light	2.45
Cabell	2.50
Ragland	1.40
Corning	2.35

CENTRAL STATES

	March 10 1926
Illinois	2.12
Indiana	2.00
Lima	2.23
Plymouth	1.65
Princeton	2.12
Waterloo	1.10
Wooster	2.35

WESTERN KENTUCKY

Posted by Indian Refining Company for crude from Allen, Warren, Franklin, Davies, Barren, Cumberland and Monroe Counties

36 and above	1.80
33 to 35.9	1.70
32.9 and below	1.60

MID-CONTINENT

	Prairie Sinclair* Texas Gulf	Magnolia
Below 28		1.20
28 to 28.9 gravity	1.40	1.40
29 to 29.9 gravity	1.48	1.48
30 to 30.9 gravity	1.56	1.56
31 to 31.9 gravity	1.64	1.64
32 to 32.9 gravity	1.72	1.72
33 to 33.9 gravity	1.80	1.80
34 to 34.9 gravity	1.88	1.88
35 to 35.9 gravity	1.96	1.96
36 to 36.9 gravity	2.04	2.04
37 to 37.9 gravity	2.12	2.12
38 to 38.9 gravity	2.20	2.20
39 to 39.9 gravity	2.28	2.28
40 to 40.9 gravity	2.36	2.36
41 to 41.9 gravity	2.44	2.44
42 to 42.9 gravity	2.52	2.52
43 to 43.9 gravity	2.60	2.60
44 to 44.9 gravity	2.68	2.68
45 to 45.9 gravity	2.76	2.76
46 to 46.9 gravity	2.84	2.84
47 to 47.9 gravity	2.92	2.92
48 to 48.9 gravity	3.00	3.00
49 to 49.9 gravity	3.08	3.08
50 to 50.9 gravity	3.16	3.16
51 to 51.9 gravity	3.24	3.24
52 and above	3.32	3.32

*Sinclair's postings include no oil above 44 gravity.

NORTH AND CENTRAL TEXAS

Ranger, North Texas, Mexia, Powell, Richland, Wortham, Lytton Springs, Currie, Moran, Somerset and Big Lake crude

	Somerset (Grayburg)	Humble O. & R. Co. Texas Co.*
28 to 28.9 gravity	1.15	1.40
29 to 29.9 gravity	1.25	1.48
30 to 30.9 gravity	1.31	1.56
31 to 31.9 gravity	1.39	1.64
32 to 32.9 gravity	1.47	1.72
33 to 33.9 gravity	1.55	1.80
34 to 34.9 gravity	1.63	1.88
35 to 35.9 gravity	1.71	1.96
36 to 36.9 gravity	1.79	2.04
37 to 37.9 gravity	1.87	2.12
38 to 38.9 gravity	1.95	2.20
39 to 39.9 gravity	2.01	2.28
40 to 40.9 gravity	2.07	2.36
41 to 41.9 gravity	2.13	2.44
42 to 42.9 gravity	2.19	2.52
43 to 43.9 gravity	2.25	2.60
44 to 44.9 gravity	2.31	2.68
45 to 45.9 gravity	2.31	2.76
46 to 46.9 gravity	2.31	2.84
47 to 47.9 gravity	2.31	2.92
48 to 48.9 gravity	2.31	3.00
49 to 49.9 gravity	2.31	3.08
50 to 50.9 gravity	2.31	3.16
51 to 51.9 gravity	2.31	3.24
52 and above	2.31	3.32

Corsicana Heavy $1.15 per barrel, posted by Magnolia.

*Gulf Coast light oil is included in this schedule, posted by The Texas Company.

SOUTH TEXAS

Mirando (Texpata)	1.15
Mirando (Magnolia)	1.15

(Continued on next page)

GULF COAST

	March 10 1926
Grade "A"	1.50
Grade "B" at Blue Ridge, Hull and Pierce Junction	1.25

LULING

Based on Contract	1.20

LOUISIANA-ARKANSAS

Caddo

38 gravity and above	2.20
35 to 37.9 gravity	2.10
32 to 34.9 gravity	2.00
Below 32 gravity	1.85

Homer

35 gravity and above	1.95
33 to 34.9 gravity	1.85
31 to 32.9 gravity	1.75
Below 31 gravity	1.60

Cotton Valley

All grades	1.10

Haynesville

33 gravity and above	1.85
Below 33 gravity	1.75

Bull Bayou

38 gravity and above	2.00
35 to 37.9 gravity	1.85
32 to 34.9 gravity	1.70
De Soto crude	2.05
Crichton	1.85
Bellevue	1.50
Jennings	1.50
Vinton	1.50
Edgerly crude	1.50
Urania	1.40

Smackover
(Standard, Gulf, Louisiana, Shreveport-El Dorado and Atlanta)

27 and above	1.40
26 to 26.9 gravity	1.35
25 to 25.9 gravity	1.30
24 to 24.9 gravity	1.25
Below 24 gravity	1.00

The Texas Company

27 and above	1.40
26 to 26.9 gravity	1.35
25 to 25.9 gravity	1.30
24 to 24.9 gravity	1.25
Below 24 gravity	1.00

El Dorado

	March 3 1926
33 gravity and above	1.85
Below 33 gravity	1.75
East Field (Calion)	.95

Stephens District

26 gravity and above	1.50
Below 26 gravity	1.30

WYOMING-MONTANA

Wyoming

Byron	2.25
Ferris	1.53
Elk Basin	2.15
Grass Creek	2.15
Rock Creek	2.00
Lost Soldier	1.10
Lance Creek	2.15
Mule Creek	1.50
Notches	.65
Big Muddy	2.00
Osage	2.15
Hamilton Dome	1.80
Pilot Butte	1.75
Torchlight-Greybull	2.15
Lander	1.10

Salt Creek
(Midwest Refining Company)

29 to 29.9 gravity	1.48
30 to 30.9 gravity	1.56
31 to 31.9 gravity	1.64
32 to 32.9 gravity	1.72
33 to 33.9 gravity	1.80
34 to 34.9 gravity	1.88
35 to 35.9 gravity	1.96
36 to 36.9 gravity	2.04
37 to 37.9 gravity	2.12

Montana

Sunburst	1.15
Cat Creek	2.15

NEW MEXICO

Artesia	1.70
Hogback	1.95

CANADIAN CRUDE

Oil Springs	2.70
Petrolia	2.63

*Bounty on Canadian crude is ¾ cent per gallon, or 26¼ cents per barrel.

Tullos Gusher Increases Urania Production

Shreveport, La.—Following a remarkable increase in the production from the Tullos gusher, drilled by Goodwin and Daniels on the Tullos property in section 26-10n-1e, the average daily output of the Urania field was increased last week to more than 8600 barrels per day. The Tullos well, which was completed about ten days ago with an initial flow of 1000 barrels per day from a total depth of 1552 feet, has increased to around 7500 barrels per day, if permitted to flow open. The well has blown out several tons of sand, although it is still making clean pipe line oil. Because of this sand condition, it is closed in every night, although it is making around 3500 barrels per day when reopened during the day time.

According to a recent survey of the field, the current daily average production is approximately as follows:

Goodwin Daniels Syndicate	3500
Louisiana Oil Refining Corp.	1250
Beckman & Freeman	710
Clark Trust	480
Natural Gas & Fuel Corp.	410
Standard Drilling Company	375
Hamilton & Baker	375
Explorer Oil Company	225
Keen & Woolf	200
Tullos Oil Company	175
Standard Oil Company of La.	135
Carter & Hurley	120
J. T. Cox	115
Dixie Oil Company	75
B. & B. Drilling Company	75
Zeigen et al	75
H. L. Hunt	75
Hunt-McCurry-Zoder Syndicate	70
Atlantic Oil Producing Company	60
Ayers Brothers	50
O. F. Whittaker	30
Galloway et al	30
Ohio Oil Company	20
Love et al	20
Alexandria Oil Company	10
J. Meyerscough	5
Ab Jones	5
Total	8670

Considerable trading activity has followed the completion of the Hunt-McCurry-Zoder extension well, located in section 7-10n-2e. Hamilton and others are said to have purchased a 20-acre tract described as the west half of the southeast quarter of the northeast quarter of section 17 of the same township, paying $2500 in cash and $6000 additional out of production. Marcus and others are said to have purchased a 30-acre tract in the northwest quarter of the northeast quarter of section 7, in which the Hunt well is located.

Simon & Keisker have bought forty acres in three tracts described as the NW¼ SE¼ SE¼, S½ NE¼ SE¼, and NE¼ NE¼ NE¼ of section 25-10n-1e. Lipscomb and others have bought the W½ NW¼ SE¼ of section 25-10n-1e, for a consideration quoted as $500 per acre in cash and a like sum out of oil production. Clark & Spears have acquired the lease covering the SE¼ NW¼ SE¼ and S½ NE¼ NW¼ SE¼ of section 25-10n-1e. The Cook Drilling Company is said to have purchased a five acre tract in section 25-10n-1e, paying $750 per acre cash.

The Dixie Oil Company is preparing to mud off a gas flow at 3592 feet in its Noel B-2, in section 13-21-15 of the Pine Island District to permit deeper drilling. The Robertshaw deep-sand discovery oil well is still flowing at the rate of 3750 barrels of fluid per day, of which about 500 barrels is oil.

The same company is setting a string of six-inch casing in order to test a show of gas logged at a total depth of 3354 feet in its Jenkins deep test, in section 9-12-11, of the De Soto-Red River district.

D. C. Richardson, of Shreveport, who recently opened up a new producing area in section 13-20-15, near Dixie and Belchier, Caddo Parish, was fortunate in securing a supply of fuel for production and development operations by bringing in a small gas well at a shallow depth near his discovery oil well. The gas well, which is good for around two million cubic feet per day, was cased with six-inch pipe set at 760 feet, and was finished at a total depth of 803 feet.

Open New Headquarters

Amarillo, Texas.—A separate district has been created by the Empire Gas & Fuel Company to carry on exploration work in the Panhandle district of Texas with headquarters in the Western building, Amarillo. The personnel of the Amarillo office includes: J. G. Dickinson, production superintendent; C. Don Hughes, chief geologist; L. W. (Buddy) Lowe, manager land department; and Ed Stinson, scout. Empire is now completing a wildcat test in Gray County as a high gravity oil producer.

Paul M. Buchanan, scout for the Gulf Production Company in the Breckenridge-Ranger district, has resigned to accept a similar position with the Roxana Petroleum Corporation, and will be stationed in the Wichita Falls district.

E. O. Opherkuck, sales manager for the Superior Gas Engine Company with headquarters at Springfield, Ohio, spent the past week visiting in Fort Worth and Houston.

California's Most Promising Wildcat Near Richfield Field

Los Angeles, Calif.—Nineteen feet of rich oil sand has been found in the Mahala Oil and Gas Company's No. 2 wildcat, five miles northwest of Richfield field, and the operation now holds the reputation of being the most promising wildcat of Southern California.

From 4000 feet to 4623 feet, the present depth of the hole, formations have consisted of gray sand, gray shale and gray sandy shale, all of which shows a substantial cut of 25.5 gravity oil.

The well, which is located on a 1120 acre tract held by the company in sections 12 and 13, township 3 south, range 8 west, is being drilled with cable tools by operators who have been active in the immediate vicinity for a number of years. It is 4,000 feet north of the same company's No. 1, which is producing 10 barrels per day despite the fact that three strings of casing have been dropped in the hole and that the oil has to rise of its own accord 168 feet above the productive zone before it comes in contact with the pump. No. 1 is producing from a 3742 foot to 4000 foot zone, according to John F. Strauhal, an officer of the company.

Northwest of the present wildcat, the Union Oil Company, through one of its executives, holds about 4,000 acres, and the Zenith Oil Company, which has some small production coming from 1100-1200 feet, has some acreage. This latter zone was passed up in the Mahala Oil and Gas Company's test. Other companies holding acreage in the vicinity are the Standard Oil Company, the Chino-Corona Company and Oscar Howard, an independent.

COMPLETIONS FOR PAST WEEK IN U.S. FIELDS

Summarized Review of Field Results

State—	Completions This Week	Completions Last Week	Producers This Week	Producers Last Week	Gas Wells This Week	Gas Wells Last Week	Failures This Week	Failures Last Week	Initial Production This Week	Initial Production Last Week
Arkansas	23	13	12	11	3	2	8	..	1,295	2,340
California	23	10	21	8	..	..	2	2	5,769	2,769
Colorado	..	2	..	..	..	..	..	2	....	.....
Indiana	5	5	5	4	..	..	..	1	88	58
Illinois	4	16	4	11	..	..	..	5	180	310
Kansas	35	38	20	18	1	4	14	16	3,508	1,435
Kentucky	25	23	18	17	1	1	6	5	170	145
Louisiana	27	31	16	28	2	..	9	33	3,180	7,997
Michigan	..	..	..	..	..	..	..	..	....	.....
Mississippi	..	..	..	..	..	..	..	..	....	.....
Montana	..	5	..	2	..	3	..	..	....	6,700
New York	..	4	..	4	..	..	..	..	....	8
New Mexico	6	8	5	5	..	..	1	3	475	415
Ohio	30	27	14	10	9	12	7	5	344	208
Oklahoma	133	68	68	39	18	7	47	22	11,433	11,726
Pennsylvania	6	32	1	30	2	1	3	1	5	451
Tennessee	1	1	..	..	..	1	1	..	....	.....
Texas	126	128	66	73	7	5	53	50	17,513	13,460
Utah	..	..	..	..	..	..	..	..	....	.....
West Virginia	33	40	10	11	17	24	6	5	141	161
Wyoming	7	9	6	9	..	..	1	..	2,485	10,045
Totals	484	460	266	280	60	60	158	120	46,586	58,228

Texas

TEXAS MISCELLANEOUS

Company, Well and Location	Initial Production Bbls.	Depth
Mirando—		
Kitselman & St. Albans Holbein..	¶	2107
Edington et al No. 2 Puig	2400	1726
Kirkpatrick-Lucas No. 2	¶	1666

SOUTH LOUISIANA

Company, Well and Location	Initial Production Bbls.	Depth
Vinton—		
Vinton Pet. Co. Rescue 17	60	2190
Gray 54	**75**	**2425**
Marrs McLean Gray 9	1300	1625
Gulf Ref. Co. of La. F. H. Gray 3..	300	1660
Evangeline—		
The Texas Co. Latreille 103	40	2275

GULF COAST

Company, Well and Location	Initial Production Bbls.	Depth
Spindletop—		
Gulf Prod. Co. Gladys 220	125	875
Yount-Lee Oil Co. Gladys 2	*	2245
Goose Creek—		
Gulf Prod. Co. Wright 12	*	2500
Orange—		
Gulf Prod. Co. Kishi-Lang 2-B, wo..	1600	4625
Kishi-Lang 8-B	1600	4625
Gulf Coast Oil Corp. Leon 1, wo...	*	2750
Humble Oil & Ref. Co. Chesson 26-A	*	2450
The Sun Co. Caren 1	*	4900
High Island—		
The Sun Co. Cade 6-C	350	2375
Boling—		
Gulf Prod. Co. Chase 1	*	2703
Oxford Oil Co. Rogers 1	*	1860
Sun Company Taylor 1	100	3071
Big Creek—		
Gulf Prod. Co. Davis 26	600	3650

SOUTH VERNON

Company, Well and Location	Initial Production Bbls.	Depth
Humble O. & R. Co. Waggoner 7-H	45	1897
Wagogner 1-O	600	1917
Landreth Prod. Corp. Waggoner 8-F	35	1898
Waggoner 1-L	20	1870
Travis Oil Co. Zipperle 2	*	2975

ELECTRA

Company, Well and Location	Initial Production Bbls.	Depth
R. S. Allen et al Ancell 1	*	1610
Apple-Brandeberry et al Jennings 17-A	40	1704
Bullington-Lee & Pendleton Jennings 14	*	1855
Fisher-Jennings Oil Co. Burnett 3..	*	801
Gulf Prod. Co. J. L. Waggoner 3-F..	*	1956
W. A. Patterson et al Douglas 2..	*	1020
Perkins-Cullum et al Beaver-Electra 5	125	1631
G. R. Ridgeway et al Powell 4....	8	839
Ryan Pet. Co. G. E. Nance 51.....	8	1227
G. E. Nance 52	60	1315
Staley-Wynne et al Hines 1.....	*	2035
Texhoma (Continental) O. & R. Co. Burnett 7-E	45	1633
Waggoner 14	35	1770

SOUTH VERNON

Company, Well and Location	Initial Production Bbls.	Depth
Humble O. & R. Co. Stephens 22....	300	2382
Waggoner 4-I	185	1890
Waggoner 2-O	175	1880
Landreth Prod. Corp. Waggoner 2-CC	170	1891
Waggoner 4-CC	350	1906
Waggoner 2-I	500	2582
Waggoner 1-Q	225	2355
Waggoner 1-U	80	2338
Waggoner 1-OO	125	2353
A. D. Morton et al Waggoner 3....	*	1887
Petroleum Prod. Co. Dill 7-A.....	100	2320
Roxana Pet. Corp. Waggoner 5-A..	175	1949
Staley-Wynne et al Stephens 12....	125	2353

ARCHER COUNTY

Company, Well and Location	Initial Production Bbls.	Depth
Burns-Maxson et al A. P. Jackson 2	55	1552
Geo. Parrish 1	*	1635
Burns-Maxson & Humble Ella Brown 5	40	1587
B. F. Caldwell et al Hutcherson 2 dd	200	1386
Carter & Roxana Pet. Corp. L. F. Wilson 1	*	1525
Consolidated Oil Co. J. B. Wilson 1	*	1660
Consolidated & American Ref. Co. Harris 1	*	1504
Empire Gas & Fuel Co. L. F. Wilson 11-E	*	1760
Gulf Prod. Co. L. M. Hayter 2....	40	1455
W. T. Coffield 1-A	*	1724
L. W. Kunkel 6	30	1202
L. P. Hammond et al Thom 1.....	*	2003
Hart Oil Corp. James Fuchs 1....	*	1803
J. K. Hughes et al Brom 13	80	1410
Ilseng Prod. Co. Prideaux 2, (Sec. 17)	8	636
Prideaux 1, (Sec. 15)	40	665
Kentucky Oil Corp. J. B. Miller 3.	*	919
Maer-Staniforth et al W. T. Knight 1	*	1404
Morrison 1	*	1503
McCarty Oil Co. L. F. Wilson 17-B	65	907
L. F. Wilson 20-B	35	900

Company, Well and Location	Initial Production Bbls.	Depth
L. F. Wilson 6-C	15	1598
Oil Investment Co. Fee 13	20	1193
Pandem & Simms Oil Co. Pandem 10	25	1453
Pandem 11	55	1451
Pet. Producers Co. Kunkel 1	*	1309
Phillips Pet. Co. Kreeger 1	*	1501
Prairie O. & G. Co. Kreeger 4	*	1435
Roxana Pet. Corp. Kreeger 3	135	1430
Pandem Fee 1	80	1451
Staley-Wynne et al Parrish 3-A	90	1584
The Texas Co. Jeske 1	400	1167
Mrs. J. E. Parris 1	*	1803
Texhoma O. & R. Co. D. L. Wold 1-A	20	1305
S. E. Oldham 12	200	1374
Abercrombie-Taylor 4	35	1373
Wampem Oil Corp. Kreeger 4	*	1502
Wanderer Oil Co. L. F. Wilson 1	*	1650
W. C. Young et al A. C. Abney 3	5	429

BURKBURNETT

Magnolia Pet. Co. Hugh Reilly 125	15	1336
A. D. Robinson et al J. E. Roller 22	50	1062

ELECTRA

Culberson Oil Co. Waggoner Bros. 35	*	1630
Culberson & Hunter Waggoner Bros. 1	30	851
T. F. Hunter et al Waggoner Bros. 10	20	1518
L. B. Mitchell et al Waggoner Bros. 1	30	1528
Perkins-Cullum et al Beaver-Electra 6	*	2008
Petroleum Prod. Co. Douglas 1	90	1630
Ryan Pet. Co. G. E. Nance 53	20	1314
Staley-Wynne et al Hines 2	20	890
Texhoma O. & R. Co. Waggoner Bros. 5	15	600

K-M-A AND IOWA PARK

Electra-Gulf Oil Co. Murrey 8	15	889
Gulf Prod. Co. L. C. Parker 1	*	2001
W. A. Plummer et al Chilson 5	10	693
U. E. Weisendinger et al Adams-Parker 1	*	1503
White Bros. et al Mitchell 1-B	105	1524

BAYLOR COUNTY

Brit Cranfill et al Mills 5	*	1448
Gatewood-Gwynn et al Stevens 1	*	2260
Murchison-Fain Oil Co. Portwood 1	*	1504
G. C. Wood et al Stevens 1	*	1750

CLAY COUNTY

J. L. Nelson et al Chapin 1	†	1285

MONTAGUE COUNTY

Company, Well and Location	Initial Production Bbls.	Depth
Waite Phillips Co. Cunningham 1	¶12	710
The Texas Co. J. B. Oldham 3	35	1131
Texhoma O. & R. Co. N. J. Howard 7	65	1366

BROWN COUNTY

Carter-Evans et al (now Humble) Dunn 2	325	1110
Gilman-McMurray et al Chambers 3	175	1223
Chambers 8	45	1222
Humble O. & R. Co. Hodnett 1	¶1-65	1170
Kilgore 1	75	1162
McCarter et al Allen 1	150	1100
McLester Oil Co. Clark 4	†	800
Wooldridge 1-B	80	1252
Moore et al Clark 1	*	600
Prairie O. & G. Co. Gaines 13	50	1270

COLEMAN COUNTY

White Eagle O. & R. Co. Casey 1	†	455
Allen et al Terry 1	*	1105
Burt et al McClatchey 1	*	1242

CALLAHAN COUNTY

Kirk-Brewer et al Blk. 3, Townsite 1	*	1463
McCamey et al Blk. 9, Townsite 1	*	1489
Mook-Texas Oil Co. McDonough 7	125	1431
Stone & Co. Blk. 12, Townsite 2	100	1463

EASTLAND COUNTY

Leon Oil Co. Kimbrough 1	¶4	3265
Johnson et al Smith 1	*	1340

PALO PINTO COUNTY

Spoor et al Shepard 1	*	1365

STEPHENS COUNTY

Landreth Prod. Corp. Akin 1	¶14-90	3190
Mid-Kansas O. & G. Co. Lee 1, dd	270	3692
Hill 7	130	3163
Swensondale Oil Corp. Swenson 1-B	¶2	2253
Texas Pacific Coal & Oil Co. Binney 61	55	1919

SHACKELFORD COUNTY

Hope Pet. Co. Reynolds 7	25	1298
Roeser-Pendleton & Marland Oil Co. Cook 1	*	3007
Tannehill et al Moberly 15	*	1334

YOUNG COUNTY

Atlantic Oil Prod. Co. et al Wells 1	*	903
Gulf Prod. Co. J. E. Boley 1	*	1520
J. T. Richardson 1-A	*	1480
Nine Hundred Oil Co. Benson 7	*	910

Just Published

Outlines of the Occurrence and Geology of Petroleum

An Introductory Handbook

By I. A. STIGAND, M.A., F.G.S.

As the title suggests, this handbook is elementary in character, and the main object is to furnish an outline of the general features concerning the occurrence and geology of petroleum or bitumen, in a condensed manner, and with especial reference to practical interest; in the hope that it may serve as an introduction to those desiring to become acquainted with the subject (or students in oil-geology), and that it may also be of some interest to the large class who are concerned in its economic or commercial aspects.

The discussion is limited to the more pertinent theoretical questions and practical considerations, or the general topics of interest; and, where possible, is illustrated by reference to known examples in the field. The materials and the views expressed are founded on personal observations and studies made in various regions during two decades.

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SEND CHECK TO

THE GULF PUBLISHING CO.,

1716 Dallas Avenue, Houston, Texas

Mountain States

WYOMING

Company, Well and Location	Initial Production Bbls.	Depth
Salt Creek—		
Midwest Refining Co. No. 31-L, SE¼ 26-40-79	2000	2415
Midwest Oil Co. No. 14-A, SW¼ 11-40-79	60	2425
No. 7, NW¼ 25-40-79	100	1140
Wyoming Associated Oil Co. No. 28, NW¼ 35-40-79	110	1050
No. 21-A, 2-27-26	90	1780
No. 27, NW¼ 24-40-79	125	1265
Arminto—		
Texas Prod. Co. No. 1, SW¼ 20-37-86	*	3534

NEW MEXICO

Artesia—		
Ohio Oil Co. No. 1-T, 34-21-26	*	5805
No. 6-TA, 28-18-28	50	2825
Rattlesnake—		
Continental Oil Co. No. 14, SE¼ 2-29-19	100	860
Table Mesa—		
Continental Oil Co. No. 5, 3-27-21	175	1360
Eddy County—		
V. K. F. Oil Co. No. 7, 17-18-28	75	2136
Flynn, Welch & Yates No. 38, SW¼ 3-18-28	75	2450

Arkansas

Stephens Field, Ouachita County—		
Magnolia Pet. Co., Rhinehart 7, 36-15-20	25	2182
Smackover Field, Ouachita County—		
Humble O. & R. Co., Laney 8, 32-15-16	210	2413
Marine Oil Co., Snyder 12, 34-15-15	100	2366
Meeks Trust, LaGrone 2, 36-15-17	20	2308
Ohio Oil Co., Cramer 18, 27-16-16	20	2289
Phillips Pet. Co., Farris 8, 34-15-15	50	2552
The Texas Co., Berry 10, 33-15-15	*	2370
Umstead et al, Fee 3, 4-16-15	¶25	2510
Unity Pet. Co., Berry 4 33-15-15	*	2004
Smackover Field, Union County—		
Arkansas Fuel Co., Ferguson 8, 6-16-15	40	2544
Lyall et al, Fee 1, 3-16-15	100	2366
Mazda Oil Corp., Lawton H-4, 10-16-15	¶20	2603
Owen et al, Parks 1, 32-16-16	*	2394
Pure Oil Co., Meriweather 8, 6-16-15	¶35	2642
The Texas Co., Graves 11, 3-16-15	5	2554
Total, 14 wells	¶80-545	
El Dorado District, Union County—		
Richardson et al, Meeks 1, 22-19-15	*	2992
Lisbon District, Union County—		
Howell & Knowles, Springer 1, 36-17-16	*	2627
E. M. Jones, Andres 1, 16-17-16	75	2138
Marine Oil Co., Slaughter 1, 9-17-16	600	2103
Rovenger Oil Corp., Dumas 4, 9-17-16	75	2097
Total, 4 wells	750	

Louisiana

Caddo Parish—		
Dixie Oil Co., Fitzsimmons 7, 14-21-15	10	1809
Robertshaw 72, 14-21-15	15	1700
D. C. Richardson, Youree-Randolph 4, 13-20-15	¶2	803
Total, 3 wells	¶2-25	
Cotton Valley Field—		
Alabama Pet Co., Robins A-3, 21-21-10	150	2583
Monroe Gas Field—		
Natural Gas & Prod. Co., Jeny 1, 1-10-3e	¶20	2152
Urania Field—		
Atlantic Oil Producing Co., Tullos 8, 23-10-1e	*	1530
Clark Trust, Tullos 2, 23-10-1e	50	1502
Dixie Oil Co., Urania 2, 24-10-1e	10	1577
Explorer Oil Corp., Gaharan 2, 26-10-1e	100	1557
Galloway et al, Pendarvis 1, 24-10-1e	50	1562
Hamilton et al, Bennett 2, 25-10-1e	150	1540
Hunt-McCurry-Zoder Synd., Urania		

Company, Well and Location	Initial Production Bbls.	Depth
1, 7-10-2e	350	1520
Louisiana Oil Ref. Corp., Bass 2, 24-10-1e	20	1558
Tremont B-10, 25-10-1e	*	1592
Tremont B-12, 25-10-1e	*	1562
Tremont B-16, 25-10-1e	500	1539
Standard Drilling Co., Roark 1, 26-10-1e	*	1573
Zeigen et al, Urania 2, 18-10-2e	*	1604
Total, 13 wells	1230	

California

Company, Well and Location	Initial Production Bbls.	Depth
Long Beach—		
Aiken & Delaney's Cerritos 1	1110	4440
California Pet. Corp.'s Hilton 1	100	4429
A. J. Delaney's Cerritos 7	100	4400
Cerritos 11	200	4430
Featherstone-Preston's Cerritos 14	100	4455
Gallagher Trust's Cerritos 1	200	4430
Geo. F. Getty's Los Cerritos 11	350	4397
Julian Pet. Corp.'s Aidline 1	200	4460
W. I. Lake's Los Cerritos 1	500	4450
McAlpine-Craig-Wilbur's 2	275	4425
McKeon Oil Co.'s Cerritos 4	550	4450
Cerritos 5	400	4455
W. R. Ramsey's Municipal B-7	150	4640
Reppetto Hills Oil Co.'s 4	200	4445
United Oil Co.'s Lineberger 1	100	4396
Stakemiller 1	419	4482
Taylor 1	200	4457
Athens-Rosecrans—		
California Pet. Corp.'s Colby 1	65	4450
Julian Pet. Corp.'s Athens 6	300	5270
California Pet. Corp.'s Smith 4	*	3027
Torrance—		
California Pet. Corp.'s Waldron 1	50	3600
Kern Front—		
George F. Getty's Lenhart 3	200	2233
General Pet. Corp.'s Oeschener	*	6600

Kansas

Company, Well and Location	Initial Production Bbls.	Depth
Butler County—		
John Rogers, Bitler 11, SWc NE NW 29-26-8	25	2750
Empire G. & F. Co., Skaer 14, SEc NE NE 35-27-4	37	2592
Amerada Pet. Co., Dungey 3, SWc NW SE 22-27-7	100	2738
Sinclair O. & G. Co., Barnhill 2, SWc NE SE 22-27-7	139	2707
Texas Co., Truesdale 2, NEc SE SW 22-27-7	*	2745
Cowley County—		
J. A. Hull, Wallace 14, SEc NE SE 24-32-4	150	3064
Gypsy Oil Co., Wyckoff 1, C N L SE NE SW 28-33-3	*	3365
White Eagle O. & Ref. Co. et al, NEc 11-33-4	*	3515
Elk County—		
Neeley O. & G. Co., Miller 1, SWc 21-31-10	¶3½	1400
Ellis County—		
Faler et al, Murphy 1, NWc NE 35-15-20	*	3600
Greenwood County—		
Theta Oil Co., Pixlee 7, SEc NE SE 8-22-10	50	2353
Davis, Hazlett et al, DeMalorie 10, NWc SW NE 12-22-10	1225	2135
Manhatten Oil Corp., DeMalorie 3, NWc NE 12-22-10	450	2090
Sinclair O. & G. Co., Browning 35, SEc NW NW 20-22-10	60	2387
Empire G. & F. Co., Fromme 7, SWc SE NW 14-22-11	150	1908
Morris 2, SWc NE 19-23-9	75	2572
Rhodes & Abel, Blackwell 3, C S L NE 16-24-13	45	1710
Swartz et al, Jones 1, NWc NE 6-22-12	*	3600
Phillips Pet. Co., Pixlee 1, NWc NE 3-22-10	*	2206
Skelly Oil Co., Prather "A" 1, SWc SE 20-22-10	*	2370
Prather "B" 1, NWc NE 29-22-10	*	2873
Mission Oil Co., Dales "B" 6, SEc SW NW 25-23-8	*	2555
McGinnis et al, Wiggins "A" 2, NWc SE 30-24-11, owd	*	2025
Cement Oil Co., Porter 1, NWc SE SW 26-26-9	*	2563
Harvey County—		
Wentworth Bros., Brandiweide 1, SWc NW NE 4-23-2	*	2450
Lyon County—		
White Eagle Oil & Ref. Co., Pixlee 2, NWc SW SE 34-21-10	200	2184
Phillips Pet. Co., McIllivane 3, SEc SW NW 33-21-12	10	1932
Ritchey & Moore, Pixlee 4, NEc SW 34-21-10	*	....
Russell County—		
Derby Oil Co., et al, Dodge 2, NEc SW SW 32-11-15	240	2873
Sutton 5, NEc SW SW 32-11-15	76	2772
Tom Johnson, Kollman 6, NEc SE NW 5-12-15	120	2784
Mid-West Ref. Co., Oswald 21, NEc SW NW 8-12-15	160	2935
Valerius O. & G. Co., Oswald 8, SEc NE SW 8-12-15	100	2935
Oswald-Valerius 12, NWc SW NE 8-12-15	96	2967
Woodson County—		
Alters et al, Hunt 1, SWc 13-25-14	*	1585

Oklahoma

Company, Well and Location	Initial Production Bbls.	Depth
Carter County—		
Twin State Oil Co., Carpenter 2, NEc NW 22-2-3	570	3034
Amerada Pet. Corp., Farve 23, C SE SW NE 20-5-1	40	1630
Farve 22, C W½ SE NE 20-5-1	*	1770
Caddo County—		
Magnolia Pet. Co., Surbeck 7, SWc NE SE 3-5-9	35	2405
Comanche County—		
Magnolia Pet. Co., Price 4, SWc NW SE NE 30-2-9	25	2026
Bridwell & Heydrick, Price 1, SEc NE SW NE 30-2-9	18	2278
Westheimer & Daube, Indian 2, C SE NW SE 30-2-9	*	2300
Creek County—		
Inter-Ocean & Rolland Oil Co., Big Pond 1, SWc SE NE 27-17-8	960	3146
W. Phillips, Alec 2, SEc NE SE 27-17-8	800	3170
Kennedy et al, Strip 1, NWc NE NW 6-18-12, owd	10	2230
J. H. Wright, Dawson 10, C S L NE SW 24-17-10	70	1853
Riverland Oil Co., Johnson 1, NWc NE SW 28-18-11, owd	¶4½	2409
Henry Oil Co., Gillette 1, SEc SW 5-16-12	80	2045
Nowata Oil & Ref. Co., Strip 1, C N L N 15-acres SW NW 35-17-8	*	3743
Red Bank Oil Co., Martin 1, C NW SE 13-18-10	*	2825
Burks-Hoffield Oil Co., Edwards 7, C W L SW NW 33-16-9	*	2640
Tom Kelly, Wright 1, C SW NE SW 3-14-10	*	3264
Garvin County—		
Magnolia Pet. Co., Ringer 3, NEc NW SW SW 11-1-3	40	1571
Mauldin "A" 7, SWc NW SW SE 16-1-3	30	1584
Grady County—		
Skelly Oil Co., Edmondson 2, SWc NW NW 23-5-8	¶2	1360
Briscoe & Hall, Scott 1, NWc NE NE 34-5-8	¶46	2350
Magnolia Pet. Co., Williams 2, C W L E½ NW SW 11-4-8	¶8½	2259
Carter Oil Co., Schramack 2, SE SW SW 35-3-5	¶½	1466
Lindsey 2, NEc NW SE SW 45-3-5	240	1504
Garfield County—		
Sinclair O. & G. Co., Belveal 31, C SW NE NE 24-22-4	*	4568
Carlew Drilg. Co., Hays 1, C NW SW NW 5-22-3, owd	*	2500
Sinclair O. & G. Co., Hartley 24, C SW SE NW 18-22-3	*	4450
Hartley 25, C NW SE NW 18-22-3	*	4465
Hughes County—		
Transcontinental & Independent, Harjo 3, C NW NE SW 26-9-9	157	3387
Empire G. & F. Co., Bruner 2, C SE NE SW 23-9-9	*	3073
Proctor 2, C NE SW NW 26-9-9	*	3483
Independent & Amerada, Seacrest 1, C SE NE SW 18-8-10	*	3530
Jefferson County—		
A. C. Brown, Indian 1, SEc SE NW 33-6-5	390	1466
Indian 2, C E½ NE NW 33-6-5	200	1332
Carter Oil Co., Jones 2, SWc NW NE 33-6-5	300	1482
Gypsy Oil Co., Seay 10, NWc SE NE 33-6-5	100	1380
Seay 11, SWc SE NE 33-6-5	100	1355
Seay 12, NWc SW NE 33-6-5	450	1334
Seay 13, NE SE NW 33-6-5	340	1337
Seay 14, C N L SE NE 33-6-5	50	1356
Ely et al, Brown 1, C SE SW 4-6-5	*	510
Prairie O. & G. Co., Seay 5, C N L NW SW 34-6-5	*	2010
Kay County—		
Comar Oil Co., Duncan 2, SEc NE SW 21-29-1, owd	101	2105
McCormick "B" 1, C NW SW SE 21-29-1, owd	100	2110
McCormick "B" 3, NEc SW SE 21-29-1	80	1967
Harris & Hahn, Frost 1-A, SWc NW 22-29-1	¶10	1645
Comar Oil Co., Meier 1, NWc NE 28-29-1	81	1996
Twin State Oil Co., Siler 1, C NW NW NW 22-25-2, owd	75	4072
Harris & Hahn, SoDowsky 1, SWc SE NW 12-26-1	*	4212
King Drlg. Co., Boone 1, SWc SE 22-29-4	*	3125
Terminal Oil Co., Frick 1, NEc NW NW 36-28-4	*	3685
Lincoln County—		
Carter Oil Co., Tuttle 5, NEc 2-14-5	110	3410
Magnolia Pet. Co., Sukovaty 12, SEc SW NW 2-14-5	212	3410
Prairie O. & G. Co., Stout 17, SEc NW NW 3-14-5	250	3446
Phillips Pet. Co., Patterson 2, NWc SE NE 10-14-5	260	3402
Patterson 2, SEc NE 10-14-5	200	3396
Gypsy Oil Co., Caves 8, SWc NW 11-14-5	80	3382
I. T. I. O. Co., Elliott 1, SWc 20-15-5	*	4557
Flynn, Morgan & Young, Stahl 1, NEc NW SW 25-15-5	*	4323
Producers & Refiners Corp., Heinzig 1, NWc SW 14-13-6	*	4379
Wilcox O. & G. Co., Jones 1, NWc SE 5-12-3	*	4851
Richardson 1, SWc NW SW 8-12-5 owd	*	4241
Muskogee County—		
New England Oil & Pipe Line Co., Smith 4, NWc SW 14-15-15	¶2	807
Noble County—		
Mid-Co Petrol. Co., Wilkins 13, C W L SE NE SE 30-24-1	*	970
K-D Oil Co., White 1, NWc SE 1-22-2, owd	*	5242
Okfuskee County—		
Transcontinental Oil Co., School Land 1, C S L SE NE NE 10-10-11,	¶2½	2482
Independent O. & G. Co., & Angelo-Tex Oil Co., Sugar 7, SWc NE 13-12-11, owd	*	2705
Okmulgee County—		
D. D. Michelson, Adams 9, SWc NW SW 20-15-12	¶2	1070
Kingwood Oil Co., Haynes 1-A, NEc SW NE 35-14-12	¶¼	1260
Devonian Oil Co., Wisner 11, SWc NW SE SE 7-15-13	250	2686
Hennessey et al, Rowe 3, C S L NE SW 8-15-14	55	1860
Nicholson Corp., McIntosh 2, SWc SE NE 14-11-13	¶1½	1347
Kingwood Oil Co., Colbert 1, NEc SE 21-14-12	*	2027
Arbitt 1, SEc NE 21-14-12	*	2770
Vierson & Walters, Tiger 3, NWc SW 3-12-12	*	3208
J. K. Gardner, Fixico 1, SWc NW SE 9-14-13	*	2665
Cumberland Oil Co., Dunn 3, SEc		

Company, Well and Location	Initial Production Bbls.	Depth
NE NW 21-13-14	*	2564
Kingwood Oil Co., Griffin 3, C W L SW NE 6-12-14, owd	*	2776
Osage County—		
Winona Oil Corp., No. 6, NEc SW NE SE 20-29-9	25	1575
I. T. I. O. Co., No. 2, C N L SE NE SE 15-29-10	5	1131
Oliphant et al, No. 4, SWc SE NE 15-29-10	100	1039
No. 5, NEc SE NE 15-29-10	90	1081
Duffield & Howard, No. 2, SEc SW NE SW 28-28-11	15	1019
Phillips Pet. Co., No. 5, SWc NW SW SE 2-27-5	175	3029
No. 11, C SW NE SE 2-27-5	500	2968
Owen Osage, No. 359, NEc SW SW 8-27-11	¶¼	1962
Seamans et al, No. 1, NEc SW 17-26-6	20	2970
Petroleum Drlg. Co., No. 16, NEc SW NE SW 26-26-8	¶1¼	1189
Interstate O. & G. Co., No. 48, NWc NE SW SE 16-26-12	15	1323
Tidal Osage Oil Co., No. 14, NWc NE NE NW 25-24-8	15	2171
Continental Oil Co., No. 3, C NE SE SE 29-24-8	1342	2601
Winona Oil Co., No. 18, C W L E½ W½ SE 28-24-10	10	1397
Barnsdall Oil Co., No. 5, SEc NW SW NW 11-24-11	25	1692
Elon Oil Co., No. 11, NEc NW SE NE 23-22-10	25	1770
Kewanee Oil Co., No. 4, SWc NE 4-22-11	60	1668
Barnsdall Oil Co., No. 9, SWc NE SW SW 18-21-9	25	2275
Okla. Nat. Gas Co., No. 708, SWc NW NE 11-21-10	¶3¼	1552
Devonian Oil Co., No. 1, C S L N½ S½ SW 27-21-10	20	1900
Kewanee Oil Co., No. 8, SW SE SW 19-21-12	100	1665
Barnsdall Oil Co., No. 13, SW SE SW SW 4-20-12	50	1990
Westland Oil Co., No. 2, NEc SE 29-20-12	30	2042
Titus & Norris, No. 3, SWc NE 7-21-11	*	2095
Continental Oil Co., No. 3, NWc SW 28-20-12	*	2052
Pawnee County—		
Magnolia Pet. Co., Fugate 3, NEc SE SW 9-20-6	25	3110
Selby O. & G. Co., & Gypsy Oil Co., Mullendore 17, C W L NW NW 1-20-7, owd	20	2808
Murray et al, Woolf 2, C E L NE NE 2-20-7, owd	40	2745
Minnehoma Oil Co., Childers 3, C E L NE NW 7-20-8	60	2383
Sinclair O. & G. Co., Brentenall 5, SWc NE 10-20-8, owd	324	2591
Magnolia Pet. Co., Newport 1, SWc 29-23-5	*	4635
Sun Ray Oil Co., Aten 3, C E L NE NW 5-20-8	*	2998
Payne County—		
Deep Rock Oil & Gas Co., Boyles 1, C SW SE 23-18-3	¶7½	3705
Fulton 1, NEc SE NE 27-18-3	258	4328
Pontotoc County—		
Lloyd & Smith, Istencheyon 1, SEc NE NW 6-3-7	¶7	1149
Seminole County—		
Morgan & Flynn, Ingram 1, C NW NW SE 10-9-5	200	3572
Magnolia Pet. Co., Carolina 2, C SW SW NW 14-8-7	704	3185
Stephens County—		
Carter Oil Co., Simms 4, NWc SE NW 2-2-5, owd	¶3	640
Dierkes & Beard, Armstrong 1, C N L NW SE 24-1-9, owd	¶½	2056
Winkler-McQueen, Springer 3, C E L SW NW 28-1-8	25	1705
Carter Oil Co., Blaydes 6, C N L SE NE 32-1-8, owd	15	2257
McMann Oil Co., Stephens 2, NWc SW NW 33-1-8, owd	35	2259
Pace et al, Gilworth 1-A, SEc NW 2-2-8	150	2214
Commercial Petrol. Co., Fobb 9-A, NWc NE SE SW 12-2-8	25	1532
Knox Petrol. Co., Isherman 1, C SW NE SE 11-2-5	*	2350
Magnolia Pet. Co., Fleming 1, SEc NE NW 26-1-9	*	3250
Russell 3, NWc SE 25-1-9, owd	*	2380
Knox Petrol. Co., Owl Oil Co., Dyal 1-A, SWc SE 7-1-8	*	2806
Lone Star Gas Co., Brooks 4, SEc SW SW 19-1-8, owd	*	2212
Magnolia Pet. Co., Stevens 6, NWc 33-1-8, owd	*	2300
David Malernee, Burke 1, NEc 34-1-8, owd	*	2233
Ballard & Choptaw, Fee 1, NEc SE NW 4-1-7, owd	*	3520
Empire G. & F. Co., Miller 7, NWc NE NW NE 5-2-8, owd	*	2229
Gant et al, Armstrong 2, C NE NE NW 8-2-6	*	3500
Tulsa County—		
Sand Springs Home, Burgess 1, C S L N½ SW 24-19-11	*	2393

Eastern States

PENNSYLVANIA

Company, Well and Location	Initial Production Bbls.	Depth
Greene County—		
Harry Cummings Rec. & Co. Floyd Hedlee 3	*	
Carnegie Nat. Gas Co. Vinton Blaker 1	¶2	2991
J. I. Eddy Frank Roberts 1	¶1	
Frank Miller & Co. James Mitchell 2	*	
Pittsburgh Coal & Gas Co. Riley Huffman 1	*	
Washington County—		
E. E. Robertson J. R. McNary 2	5	

WEST VIRGINIA

Company, Well and Location	Initial Production Bbls.	Depth
Ritchie County—		
Ira Cox Ira Cox 2	1	
South Penn Oil Co. Matilda Jamison 1	50	
Aetna Oil & Gas Co. Ross Estate 14	5	
Mahaney & Lucas A. Charmichael 1	*	
Marshall County—		
Manufacturers Light & Heat Co. A. L. Evans 1	¶2¼	
Rose McCuskey 1	¶2	
W. F. Burgess & Co. M. Morrison 1	¶2	
Decen Dev. Co. W. A. Evans 1	¶2	
Calhoun County—		
Hope Natural Gas Co. Dossie Betts 1	*	
McIntosh & Miller James A. Walton 5	¶2	
Roane County—		
Cromwell Oil & Gas Co. Michael Harold 1	¶2	
Columbia Carbon Co. W. R. Caldwell 2	¶¼	
United Fuel Gas Co. T. R. Simmons 1	¶2	
Gilmer County—		
Clem Morris & Co. Margaret Bargee 2	¶2	
Hope Construction & Ref. Co. Lewis Bennett 1	*	
South Penn Oil Co. Richmond Moore 1	¶6	
Clay County—		
South Penn Oil Co. O. D. Shockly 10	10	
O. D. Shockly 12	35	
Doddridge County—		
Hope Natural Gas Co. H. C. Bode 1	2	
Trainer & Travis R. E. Kelley 2	8	
Marion County—		
Owens Bottle Machine Co. O. C. Jones 1	5	
Earl Wise 1	¶2	
Wetzel County—		
J. J. Boundy William Smith 1	5	
Manufacturers Light & Heat Co. W. & H. Riter 1	*	
Lincoln County—		
Columbia Gas & Electric Co. Daniels Bros. 1	¶¼	
G. L. Leabon A. G. Brumfield 3	¶½	
Logan County—		
Wacatock Oil & Gas Co. Dinges Run Coal land 12	¶½	
Bolivar McDonald 1	¶½	
Wood County—		
Rothwell Oil Co. J. S. Burdette 1	*	
Parmaco Oil Co. John Maloney 2	*	
Boone County—		
Godfrey L. Cabot Anderson Land & Dev. Co. 1	¶¼	
Putnam County—		
Scott Oil Co. E. A. Taylor 1	20	
Mingo County—		
Pilgrim Oil & Gas Co. Lewis Dempsey 1	¶½	

KENTUCKY

Company, Well and Location	Initial Production Bbls.	Depth
Barren County—		
Consolidated Gas Co. H. Duff 13	5	
Wood Oil Co. Harvey 2	*	
Ziegler Bros. & Co. Bradford 6	4	
J. W. Porter McGlochlin 14	4	
Houchins Leasehold Synd. Gumm 5	2	
Johnson-Magoffin Counties—		
Holbrook Oil Co. Allen 1	*	
Oliver Jenkins W. P. Adams 7	4	
Model Oil Co. Jess Adams 4	5	
J. B. McKenna D. B. Cooper 3	1	
Lawrence-Johnson Counties—		
Townsend & Garrison W. W. Bailey 4	5	
Swiss Oil Corp. C. J. Dobyne 2, lease 6	5	
C. E. Fraley 12	7	
Owensboro District—		
Pennsylvania-Indiana Oil Synd. John Swope 11	100	750
Devis County Oil Co. Howard 4	*	810
Warren County—		
Phillips & Stewart Christian 2	4	
Lincoln Oil & Prod. Co. E. G. Davidson 2	7	1330
Allen County—		
J. F. Johnson Atty. J. L. Harris 2	2	241
Allen Oil Corp. Lew Motley 16	*	440
Estill County—		
Reno Oil Co. S. M. Maple 2	10	
Wolfe County—		
Fultz & Co. C. M. Centers 1	5	
Floyd County—		
Ohio Fuel Oil Co. Miller 2	¶2½	
Morgan County—		
Jim Patton Unknown Lease 1	*	1800
Wayne County—		
E. G. Hogue & Co. J. H. Duncan 12	*	

SOUTHEASTERN OHIO

Company, Well and Location	Initial Production Bbls.	Depth
Washington County—		
O. S. Reckard & Co. F. F. Dana 10	5	
Muskingum Gas Co. H. W. Proctor 1	¶2	
Kate G. Deming 2	¶3½	
Goddard & Cunningham G. E. Bradford 1	*	
Morgan County—		
Dally Oil Co. Mary L. Bell 1	5	

CENTRAL OHIO

Company, Well and Location	Initial Production Bbls.	Depth
Athens County—		
Townsend Oil & Gas Co. Isaac Castle 4	15	
The Pure Oil Co. Robert Hayes 4	¶2½	
McBride & Co. Frank Fair 3	¶1	
Harmon & Co. Julius Gift 1	*	
Licking County—		
Ed. H. Everett Oil Co. Felix Claypool 10	185	
Leonard Oil & Gas Co. J. W. & M. Booth 1	*	
Holmes County—		
Empire Gas & Fuel Co. George A. Hannah 1	25	
The Pure Oil Co. Carnot Miller 3	5	
Lorain County—		
Empire Gas & Fuel Co. Thomas Armitage 2	¶2	
Daugherty Bros. George Stinchcomb 1	*	2894
Wayne County—		
William Denny & Co. Earl Kinch 1	¶¼	
Arthur & Mills J. Brinkerhoff 2	*	
Medina County—		
Star Oil Co. L. J. Kent 5	8	575
Guernsey County—		
The Logan Gas Co. S. R. Williams 1	¶4	
Cuyahoga County—		
Hulse & Kundtz R. T. Mitchell 1	¶2	
Perry County—		
Ohio Fuel Gas Co. G. E. Ice 1	*	
Meigs County—		
Chartiers Oil Co. Ray Halliday 1	*	

TENNESSEE

Company, Well and Location	Initial Production Bbls.	Depth
Fentress County—		
Pat Smith Alvin York 1	*	

NORTHWESTERN OHIO

Company, Well and Location	Initial Production Bbls.	Depth
Ottawa County—		
Harris Oil Co. Edward Dietmyer 7	22	1299
River Oil Co. Ernest Busseman 6..	8	1303
Lucas County—		
The Ohio Oil Co. R. H. and M. E. Eck 19	20	1415
R. H. and M. E. Eck 20	3	....
Hancock County—		
Baseline Oil Co. J. K. Wheeler 4 ..	25	....
Allen County—		
Gwinn Oil Co. & Co. John A. Beerman 4	10	1247
Mercer County—		
N. E. Masters Harry Lewis 1	8	1189
Shelby County—		
The Ohio Oil Co. E. Christman 1.	1¼	....

INDIANA

Company, Well and Location	Initial Production Bbls.	Depth
Jay County—		
H. L. Ogle & Co. I. Campbell 2 ..	35	....
Geologist Products Corp. C. C. Harris 4	35	....
Delaware County—		
J. E. Houke Oil Co. & Co. J. W. Goings 10	12	....
Adams County—		
George S. Lacknett W. F. Johnson 4	5	....
Grant County—		
O. F. Hutchens Frank Green 1...	1	....

ILLINOIS

Company, Well and Location	Initial Production Bbls.	Depth
Wabash County—		
Mahutska Oil Co. M. Madden 2..	90	1465
Allendale Oil Co. H. A. Fox 6....	25	1371
Ballard & Andrews Kate Keiser 2 ..	25	1441
Crawford County—		
Mahutska Oil Co. A. Reedy 17...	40	947

WILDCATS FROM ALL SECTIONS

Louisiana Wildcats

COMPLETIONS

Company, Well and Location	Initial Production Bbls.	Depth
Bassier Parish—		
Corbett et al's Murff 1, 18-17-11....	*	915
Simms Oil Co.'s Sandidge 1, 9-18-11	*	1206
La Salle Parish—		..
Patrick J. White's Louisiana Central 1, 27-10-2e	*	1581
Natchitoches Parish—		
Amerada Pet. Corp.'s Wafer 1, 3-11-8	*	3402

DRILLING REPORT

BOSSIER PARISH—Arkansas Fuel Co.'s Murray 1, 14-23-14, dr 1250 ft. Benton Synd.'s Bulkley 1, 9-20-13, to set 8-inch and test 1182 ft. Collins & Woodley's Kilburn 1, 18-19-13, testing 1010 ft. Square Deal Oil Co.'s Hale 1, 17-18-11, set 6-inch 1227 ft.

CADDO PARISH—Dixie Oil Co.'s Jolley 1, 27-22-15, dr 3865 ft; Noel B-2, 13-21-15, gas 3592 ft, to deepen; Robershaw 71, 14-21-15, dr 1705 ft. Fortuna Oil Co.'s Bradford 1, 24-21-15, dr 2265 ft; Levee Board 2, 8-20-15, to sdtr collapsed cas 2985 ft; Spell 1, 29-21-15, dr 2620 ft. Gulf Ref. Co.'s Lane 17, 13-21-15, dr 3390 ft; Muslow 1, 35-21-15, dr 625 ft; Tyson 1, 14-21-15, dr 1075 ft. Ohio Oil Co.'s Ardis 1, 1-21-15, dr 3965 ft; E. K. Smith 18, 12-21-15, dr 3775 ft; E. K. Smith 19, 12-21-15, dk. D. C. Richardson's Youree-Randolph 3, 13-20-15, rig. The Texas Co.'s Caddo Mineral Lands 42, 23-21-15, dr 2290 ft; Federal-Jeems Bayou B-1, 15-20-15, dr 3750 ft.

CALDWELL PARISH—Alexander et al's Cruse 1, 6-11-4e, dk.

CLAIBORNE PARISH — Triangle Drilling Co.'s Cupp 1, 22-23-5, rig; Keen 1, 7-19-5, dr 3880 ft.

DE SOTO PARISH—Dixie Oil Co.'s Jenkins 1, 9-12-11, setting 6⅝-inch 3354 ft. Gulf Ref. Co.'s Williams A-10, 31-13-11, dr deeper, 2560 ft. J. C. Walton's Harp 1, 36-12-11, set 6⅝-inch 2510 ft.

GRANT PARISH—Dowling & McCurrry's Holmes 1, 20-9-1e, testing 1616 ft.

LINCOLN PARISH—Buckley & Palmer's Davis 1, 12-20-3w, sd 1500 ft. The Texas Co.'s Tremont Lumber Co. 1, 27-18-1w, dr 550 ft.

MOREHOUSE PARISH—Boisseau et al's Sullivan 1, 11-21-7e, rep dk 2510 ft.

OUACHITA PARISH—Culver et al's Cordell 1, 23-15-3e, sd 1360 ft. Dickson & Frue's Goodwin 1, 24-18-2e, sd 3036 ft. Southern Carbon Co.'s Jones 1, 6-16-5e, sd 3090 ft.

RAPIDES PARISH—Hincy & Mack's Barrow 1, 29-5-2e, sd 1250 ft. Pacholik et al's Voda 1, 12-4-1e, lcn. Wheeler et al's Lanier 1, 3-4-3e, to resume dr 1300 ft.

SABINE PARISH—Emlet et al's Bowman-Hicks 6, 8-7-12, sd 3710 ft; Bowman-Hicks 7, 11-7-14, rig. Toro Pet. Co.'s Pickering 1, 24-4-12, set 4½-inch 1529 ft.

UNION PARISH—Arkansas Fuel Oil Co.'s Reeves 1, 14-20-1e, dr 1825 ft. Empire Gas & Fuel Co.'s Dubach Lumber 1, 17-20-1e, sd 2771 ft.

WEBSTER PARISH—Arkansas Fuel Oil Co.'s Miller 1, 30-23-9, rig. Doern et al's Bolinger 1, 9-22-11, rig. Fortuna Oil Co.'s Bible 1, 8-20-9, to set 6-inch 4281 ft. Humble O. & R. Co.'s Cox 1, 22-21-10, fsh 4214 ft. Ohio Oil Co.'s Cox 1, 23-21-10, coring 4629 ft.

WINN PARISH—Cedar Creek Pet. Co.'s Sullivan 1, 6-10-2w, to set 8-inch 717 ft. J. R. Hale's Eagle 1, 6-10-2w, sd for cas 950 ft.

Arkansas Wildcats

COMPLETIONS

Company, Well and Location	Initial Production Bbls.	Depth
Miller County—		
Humble O. & R. Co.'s Crank 1, 5-17-25	*	1570
Nevada County—		
Humble O. & R. Co.'s Calloway 1, 10-15-22	*	1317
Ouachita County—		
J. E. Crosby's Wallace 1, 27-15-19	*	2190

DRILLING REPORT

ASHLEY COUNTY—Fine Prairie Oil Co.'s Pine Prairie 2, 1-17-6, dk. Rhodes et al's Beldsoe 1, 20-15-7, dr 2015 ft.

CALHOUN COUNTY—Magnolia Pet. Co.'s Calion 1, 29-15-14, coring 3975 ft. Southern Crude Oil Purch'g Co.'s Freeman-Smith 1, 19-14-15, sd 2713 ft.

CLARK COUNTY—Heath et al's Arnold 1, 12-9-20, skidding over. Wheelen Oil Co.'s Brown 1, 35-10-20, sd 1800 ft.

CLEVELAND COUNTY—Dedman et al's Moore 1, 28-9-10, sd 1757 ft.

COLUMBIA COUNTY—H. W. Aarnes' Brown 2, 13-15-20, dr 3130 ft. Ky-Ark Pet. Co.'s Doss 1, 29-19-20, dr 1325 ft. Phillips et al's Davis 1, 14-18-21, sd 2860 ft. Pluto Oil Co.'s Robinson 2, 23-18-23, set 8-inch 900 ft.

DALLAS COUNTY—McNeil et al's Owens 1, 29-10-16, dr 2100 ft.

DREW COUNTY—McClintock et al's Ogle 1, 35-13-5, set 6-inch 1799 ft.

HEMPSTEAD COUNTY—Burton et al's Garland 1, 23-10-25, dr 1580 ft. C. W. Robinson's Toner 1, 29-12-23, sd 2900 ft.

LA FAYETTE COUNTY—Arkansas Fuel Oil Co.'s Red River Lands 1, 18-19-24, wosr 2790 ft; Red River Lands 2, 18-19-24, dr 2520 ft. Humble O. & R. Co.'s Bodcau Fee 3, 19-16-23, lcn. Ken-Saw Pet. Co.'s Red River Valley 2, 3-20-24, sd 2820 ft.

LITTLE RIVER COUNTY—Grote et al's Allen 1, 2-13-29, sw 2952 ft.

MILLER COUNTY—Buzzard Bluff Oil Co.'s Gillespie 1, 22-14-26, sd 2067 ft. Copeland et al's Wiseman 1, 36-15-27, fsh 2650 ft. Lenze et al's Dale 1, 25-15-26, fsh 1180 ft.

NEVADA COUNTY—Greeson et al's Tidwell 1, 22-13-21, set 10-inch 40 ft. Magnolia Pet. Co.'s Johnson 1, 3-15-21, sd 4475 ft.

OUACHITA COUNTY—Buffalo Oil Co.'s Davis 2, 22-15-19, rig. Equity Oil & Dev. Co.'s Morgan 1, 27-15-19, dr 1965 ft. Gossett et al's Cosden 1, 21-15-19, wosr 1460 ft; Davis 1, 26-15-19, sd 1672 ft; Thompson 1, 22-15-19, sd 1465 ft. Harrell et al's Moline Timber 1, 32-11-17, rig. Louisiana Oil Ref. Corp's Green 1, 22-15-19, set 8¼-inch 1552 ft. Van Diver et al's Yarbrough 1, 22-14-17, sd 1600 ft. J. D. Reynolds et al's Davis 1, 22-15-19, sw, show of oil, 1516 ft, to swab; Thompson 1, 22-15-19, dk.

UNION COUNTY—Bondurant et al's Garner 1, 8-18-12, dr 1700 ft. Crawford & Sebastian's James 10, 6-16-15, dr 3185 ft.

Oklahoma Wildcats

ATOKA COUNTY—Wapanucka Dev. Co., Underwood 1, C W L SE SE 28-15-10, sd 1343 ft. Hansen et al's Dabney 1, C SE NE 17-4-11, sd 3845 ft.

BECKHAM COUNTY—W. R. Duke's McGee 1, NWc SW SE 25-8-22, set 8¼-inch at 950 ft.

BLAINE COUNTY—Okama Oil Co.'s Ekelmeir 1, SWc 21-15-10, sd 2610 ft.

CANADIAN COUNTY—Thos. Ravelle's Dawson 1, NEc SE NW 34-13-9, ur 5-inch 3680 ft. O. D. Jones et al's Sanders 1, C NE NE NE 29-11-7, sd 2150 ft.

COMANCHE COUNTY—Daisy Bell Oil Co.'s Warehime 1, C SW SW 25-4-9, cement surface pipe. Mid-Kansas O. & G. Co.'s Hendricks 1, C S L SE 33-3-10, sd 1812 ft. J. R. Abernathy's No. 1, NEc NW 24-5-11, lcn. Mid-Kansas' Cox 1, NEc SE NE 30-1-13, dr 1235 ft.

GARFIELD COUNTY — Bryan & Emery's Chevelier 1, NWc SW 6-23-4, rigging. Shaffer & Amerada's Brunken 1, NEc 32-24-4. Sinclair's Fee 1, SWc SW NE, 2-20-5, dr 2950 ft. Wilcox O. & G. Co.'s Zalondek 1, C SE SE SE, 22-24-6, dr 755 ft.

GRANT COUNTY—Dedman, Flannagan & Hennage's Sherrer 1, NEc SW 16-26-3, sd 515 ft. Lambert & Mink's Tabor 1, C SE NE SE 23-26-3, sp and sd. Gypsy Oil Co.'s Meugge 1, SEc NW 33-26-3, dr 1998 ft. Marland Oil Co.'s Webb 1, C NW NE NE 2-27-3, fsh 4111 ft.

HUGHES COUNTY—Parmenter et al's Stewart 1, C SE SW SW 14-7-9, rig. Henry, Greis & Kerr's Pearson 1, C SE SE NE NE 30-5-10, cd 3500 ft.

JEFFERSON COUNTY—Godley Oil Co.'s Woodworth 1, C NE NW 36-5-4, dr 3153 ft. Oasis' Major 1, C SE SW 34-5-6, sd may start.

KAY COUNTY—Tonkawa Dev. Co.'s McDaniels 1, C SE SE SE 15-25-1, sd 880 ft. Miss. Valley Oil Co.'s Butler 1, C NE NE NE 22-27-2, dr 3975 ft. Souligny Bros.' School Land 1, NEc NW 16-26-3, dr 2975 ft. Davis Drilling Co.'s Street 1, C NE NE NE 31-28-3, fsh 3710, show gas.

KINGFISHER COUNTY—McKenna & Crawford's No. 1, NEc SW 27-16-6, spd and sd. Bu-Vi-Bar's No. 1, SEc NW 11-19-9, lcn.

LINCOLN COUNTY—Douglas Oil Corp.'s Ewing 1, NWc 7-13-3, dr 4504 ft. Ruby et al's Cull 1, NEc NW 36-15-4, sd 4721 ft for casing. Carter Oil Co.'s Meeks 1, SWc 26-16-2, lcn. Flynn, Morgan & Young's Rittenhouse 1, NWc SE 26-16-5, ur 15½-inch at 725 ft.

LOGAN COUNTY—Blackford O. & G. Co.'s Lair 1, C S L N½ SE 28-16-1, sd 1675 ft. Haley & Pioneers' Quair 1, SWc SE 33-18-3, sd 1557 ft. Franklin Oil Asssociation's Moore 1,

SWc SE 28-18-4, dr 3620 ft. Bryan & Emery's No. 1, NWc SE 33-19-4, rig.

MAJOR COUNTY—Frantz & Slick's Gray 1, C NW 36-21-11, sd 1000 ft. Texas Prod. Oil Co.'s Cheyenne Basin 1, SWc 6-22-14, sd 200 ft.

MARSHALL COUNTY — Ramsey Bros.' Griffin 1, SW SW 10-5-5, dr 1415 ft. United "8"'s Marshall 1, SW SW 30-5-6, sd 585 ft.

NOBLE COUNTY—Miller's 101 Ranch, NEc 1-24-1, dr 670 ft.

POTTAWATOMIE COUNTY—Davis Detrick's McCathy 1, SEc NW 10-8-2, 5-inch 3860 ft. McCullough's Madgett 1, NWc 25-10-4, sd 1620 ft for water. Central National Oil Co.'s Toney 1, C SW SW SW 28-10-4, sd 755 ft. Holmand, Osmand et al's Fiddler 1, SEc NW 4-5-5, sd 545 ft.

PAWNEE COUNTY—Dixie's Roberson 1, NEc SW NW 8-21-6, 15¾-inch at 560 ft. Bu-Vi-Bar's Panfield 1, NWc 31-22-7, dr 300 ft.

SEMINOLE COUNTY—Bryan Bros.' Sam Walker 1, C SE SE SE 4-7-6, swab 40 bbls, 2763 ft. Pure Oil Co.'s Jonah 1, C E L NW NW NE 15-9-7, fsh 1478 ft.

STEPHEN COUNTY—Homa Okla Oil Co.'s Waters 1, C SW NE 10-2-9, dr 2630 ft.

TILLMAN COUNTY—Oasis Oil Co.'s Snelling 1, SEc SE SE 13-1-8, dr 950 ft. Tipton et al's Riverbed 1, C NE NE 1-5-5, sd 2918 ft.

TEXAS COUNTY—Wilcox O. & G. Co.'s Horey 1, SEc 21-4-14, rigging; Dei 1, SWc SE 28-3-13, dr 2325 ft. Reiter & Foster's No. 1, SEc SW 9-13-15, sd for machinery. Garber & Pulse's No. 1, SEc 4-1-12, rigging. Valerius O. & G. Co.'s Hughes 1, NWc SW 18-3-12, dr 100 ft.

Kansas Wildcats

BARBER COUNTY—R. B. Brown's Martin 1, NWc 14-34-11, dr 3100 ft.

BARTON COUNTY—John Herron's Everleigh 1, SEc NE 22-18-3, sd 4550 ft. Huffins et al's Smith 1, C NE SE NE 17-19-11, dr 4150 ft.

BUTLER COUNTY — Eyessen's Varner 1, NEc SW 29-25-4, lcn. Greenland & Kismet's Daley 1, SWc SE 25-24-6, lcn; Potts 1, NEc 29-24-7, lcn. W. M. Neeley O. & G. Co.'s Kiser 1, SW SE SW 12-26-7, dr 1050 ft.

CHASE COUNTY—Derby Oil Co.'s Newman 1, NWc SW 24-20-9, dr 285 ft. Dingee, Pryor & Lockhart et al's Evans 1, NWc NE 1-22-9, dr 2260 ft.

CHAUTAUQUA COUNTY—Blackwell O. & G. O.'s McCown 1, NWc SE 31-32-10, show 2290 ft, td 1593 ft.

CLOUD COUNTY—Concordie Oil & Prod. Co.'s Murdock 1, SEc 6-6-4, sd 3030 ft, cd.

COWLEY COUNTY — Pettee & Banks' Withers 1, NEc NW 32-30-5, ur 10-inch 1600 ft. Phillips Pet. Co.'s Hunt 1, NEc 16-34-5, dr 2560 ft. Branson et al's White 1, SEc SW SW 7-30-6, spd and sd. S. H. E. Petroleum Co.'s Day 1, NE NW 24-34-6, 6-inch 2250 ft.

ELK COUNTY—I. T. I. O. Co.'s Cummings 1, C NW NW 31-30-10, sd 1530 ft. Roy Shaples et al's Howard 1, SW NE 14-30-9, dr 1450 ft.

GRAHAM COUNTY — Gruien & Shilers' Baker 1, NWc SE NW 17-10-24, rig.

LYON COUNTY—Connell et al's Ball 1, SEc SW NW 23-18-10, lcn. Culp et al's No. 1, SW SE 25-19-10, rig. Troxell et al's Williams 1, NE SW 12-20-10, spd. Sheedy et al's Morris 1, NWc SE 19-21-10, sd 1000 ft. S. W. Pet. Co.'s Vorhees 1, SWc NW 34-21-10, dr 1175 ft. Bush's Eskridge 1, NE SE 36-19-11, rig. Connell et al's Lewis 1, SWc 4-20-

RENO COUNTY—Frank Hopper's Stevens 1, NWc 7-26-7, fsh 8-inch 2755 ft.

RICE COUNTY—Jasper & Beschka's Walker 1, SWc NE 10-18-6, sd 3511 ft. Stamey & Barnes' 1, SEc NE 21-20-6, sd 2726 ft, hfw.

RILEY COUNTY—Pawnee O. & G. Co.'s Marks 1, SWc NE NW 26-10-6, dr 2400 ft. 11, lcn. Gordon et al's Stilwell 1, SEc 24-20-11, lcn. Miss. Valley Oil Co.'s Neusman 1, C NW SE 25-20-11, lcn; Langley 1, C SW SE 4-21-11, rog. Abel et al's Rednoor 1, SWc 11-18-12, lcn. Abel & Finney's DeLong 1, NWc SW SW 22-18-12, machine. R. G. Gillespie's Fading 1, SWc NE 9-20-12, dr 150 ft. Connell et al's Welch 1, NEc SW 22-20-12, spd. Balliere et al's Ruble 1, SE NE 33-19-13, lcn. Gashe & Balliere's Stratton 1, SEc NW 32-20-13, lcn. Phillips Pet. Co.'s Shepard 1, SW NW 29-21-13, lcn.

OSAGE COUNTY—Baker et al's Lease 1, C SE SE 3-15-15, sd 260 ft. Rogers & Bittle's Bertha 1, SEc NW SE 28-17-15, lcn. Mull-Vit Dev. Co.'s Neil 1, NWc NE SW NW 8-17-17, sd 2835 ft.

ROOKS COUNTY—Keys Pet. Co.'s Saidon 1, NWc SW SE 7-2-20, spd and sd. C. Findeiss et al's Minx 1, SWc 25-10-9, sd 3669 ft.

SALINE COUNTY—Thrall et al's Halquest 1, SEc NE NE 15-15-4, sd 1010 ft.

SUMNER COUNTY—Roxana Pet. Corp.'s Miller 1, NE SW 17-32-2, ts 2950-60 ft. Wentz's Schwartz 1, NWc NE NE 27-34-2, rig.

WABAUNSEE COUNTY—Williams et al's Henderson 1, NEc SW NE 15-13-12, sd 3600 ft. Ramsey Pet. Co.'s Kane 1, SEc NE NE 2-11-11, dr 2005 ft.

WOODSON COUNTY—Alter et al's Hunt 1, NWc SW 13-25-14, sd 700 ft.

San Antonio Wildcats

BASTROP COUNTY—Jonhnson Bros.'s Trigg 1, dr.

BROOKS COUNTY—Benedum et al's Wormeser Bros. 1, dk.

CALDWELL COUNTY—Van Kueren Oil Co.'s Ridout 1, dr. United North & South Oil Co.'s Kelly 1, dr; Tiller, dr. E. L. Smith Oil Co.'s Burdette 1, spd in. Foster-Reiter's Brown 1, fsh. J. B. Ash et al's Jolley 1, preparing to resume drilling.

DUVAL COUNTY—Associated Oil Co.'s Sutherland 1, dr. Humble Oil Co.'s Hagist 1, dr; Wash 5, dr. Killam-Seacord's Benavides 1, dr. Grayburg Oil Co.'s Halff 1, dr. J. K. Hughes Development Co.'s Peters 1, dr. Houston Oil Co.'s No. 1, blk 16, survey 10, dr. Seagraves-Moody's Mesquite 1, dr; Walsh 1, dr; Benavides 1, set cas at 1740 ft; Benavides 2 dk; Benavides Nos. 3 and 4, lcn.

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Winnfield, La.

DEWITT COUNTY — Yoro Development Co.'s Holzaphel 2, lcn.

GUADALUPE COUNTY—Dunning & Armstrong's Dale 1, dr. Howell et al's Louis Willmann, dr. Smith-Payne-Bond's Duran 1, dr. Humble Oil & Refining Co.'s Wohlfahrt 1, dr below 250 ft.

JIM WELLS COUNTY—Benedum's Gallager 1, dk.

JIM HOGG COUNTY—Rydal-Rycade Oil Co.'s Allen 1, dr; Theodoro Vella 2, dr; E. J. Brassewell 1, set cas. Beaucamp et al's Vela 1, dr. Benedum's Wilbur Allen 1, dk. Magnolia Pet. Co.'s M. S. Bank 3, dr; No. 11 set cas at 2084 ft. Simms Oil Co.'s Palacious 1 set cas; Thompson 1, spd in. Andrews Pet. Co.'s M. S. Bank 1, dk; Bailey et al's Palacious 1, dr.

MEDINA COUNTY—Medina Oil Co.'s Taylor 2, set cas below 300 ft; No. 3, lcn; Odem 1, lcn; Odem 2, lcn. Golden West Oil Co.'s Schmidt 5, dr; Odem 1, dr 300 ft. Walsh et al's Saathoff 1, lcn. Grayburg Oil Co.'s Ward 1, rigging up. Witherspoon Oil Co.'s Nixon 1, dr; Patterson-Patterson's Longfield 1, dr. Rand et al's No. 1, dr below 500 ft, slight oil showing. Ina Oil Co.'s Johnson 1, lcn. Estham & Tarver's Viols Wilson 2, dr in. Jacobs et al's Odem 1, lcn. Kettel et al's R. Richter 1, preparing to spd in.

STARR COUNTY—Rutledge et al's Kelsey 2, dr. A. T. Woods' Porcios 1, set cas at 1040 ft. Dauchy & Bryant's Kelsey 1, dr below 1750 ft.

WILSON COUNTY—W. L. Brashers' Standish 1, dr.

ZAPATA COUNTY—Texas Company's Jennings 2, dr.

Coastal Wildcats

COMPLETIONS

Company, Well and Location	Initial Production Bbls.	Depth
Ft. Bend County—		
Rycade Oil Corp.'s Meier 4	*	2585
Harris County—		
Brain Oil Co.'s Harrel 1	*	1600
Jefferson County—		
Yount-Lee Oil Co.'s Gladys 2	2	2245
Wharton County—		
Oxford Oil Co.'s Rogers 1	*	1778
Sun Co.'s Taylor 1	100	3071
Gulf Prod. Co.'s Chase 1.....	*	2703

DRILLING REPORT

BRAZORIA COUNTY — Roxana Pet. Co.'s R. R. Kropp 1, 150 ft to N and 1150 ft to E line on R. R. Kropp 100 acres in J. M. C. Neel sur, will test sand 584 ft, td 589 ft; Clemens 1, S 78 degrees E and 12,903 ft from NW cor John McNeal league, dr 3940 ft in gumbo; Allen 2, 1741 ft E of No. 1, Sterling McNeel tract, dr 2487 ft in gumbo. Rycade Oil Corp.'s Nash 6, 500 ft and 45 degrees SW of Nash 5, Lot 2 of W. R. Nash 200 acres, 500 ft S of N line, set 12½-inch cas 1135 ft; Nash 7, 1600 ft E of W line and 200 ft S of N line of W. R. Nash 200 acres, rigging.

CHAMBERS COUNTY — W. C. Moore et al's Blanke 2, on Blanke tract, H&TC sec 39, 1500 ft W of Blanke 1, sd 1000 ft.

COLORADO COUNTY — R. C. Timms et al's Drumgould 1, H. A. Cutler tract near Eagle Lake, no report.

FORT BEND COUNTY—Rycade Oil Corp.'s Wisdom 4, 200 ft S of No. 2, off Nash dome, dr 2634 ft sand and lime; Flessner 2, 325 ft N of Nash 5 and 150 ft N and 1300 ft E of SW cor of D. Flessner 200 acres on edge of Nash dome, dr 2343 ft in gumbo and lime; J. Meier 4, on Julius Meier 207.7 acres, off Nash dome, abn 2585 ft shale. P. A. Neilan's Frederick 2, 300 ft N and E from these lines in sur 19, S. George lease, sd. Gulf Prod. Co.'s Moore 6, 84 varas to S and 2598 varas to E line, German Emig. No. 80, dr 625 ft; Davis 8, 100 ft to N and W lines on G. Watson tract, dr 3350 ft shale and line.

HARDIN COUNTY—Vacuum Oil Co.'s Teel 3, off Saratoga dome, dr 1456 ft in hard sand and boulders. Rio Bravo Oil Co.'s Fountain 5, 850 ft N and 900 ft E of SW cor of J. O. Fountain 100 acres off Saratoga dome, dr 2596 ft in gumbo. Texas Little Farms Co.'s Hawley 1, Joel E. Hawley league, sd 2952 ft, wt on cas.

GALVESTON COUNTY — Gulf Prod. Co.'s Smith 5, 300 ft S No. 2, High Island, lcn.

GOLIAD COUNTY — Houston Oil Co.'s Pettus 1, 10 miles W of Goliad, 2423 ft, sticky shale; Parks 1, 8 miles E of Goliad, dr 1842 ft in shale.

HARRIS COUNTY—The Texas Co.'s Warren 6, 1300 ft W and 800 ft S of E line, E. Ehrenberg sur, near Hockley, dr 2950 ft; Warren 7, 700 ft NW of No. 3, dr 1250 ft. Brain Oil Co.'s Harrell 1, 1¼ miles SW of Sid Westheimer 1, near Crosss Timbers, no report. Rio Bravo Oil Co.'s Setttegast 2, 650 ft W and 500 ft S of NE cor settegast 100 acres, r 4392 ft; Pierce Fee 2, 300 ft N and 75 ft E of No. 1, dk.

JEFFERSON COUNTY—Houston Oil Co.'s Sun Davis 4, T&NO sur, 400 ft N of No. 3, near Big Hill, dr 3606 ft in rock; Sun Dyson 1, near Big Hill, dr 3055 ft. Gulf Prod. Co.'s Burrell 1, 1000 ft E of Thomas 5, near Fannette, dr 2620 ft, sand. Yount-Lee Oil Co.'s Gladys 2, 75 ft S and 100 ft E of NW cor of blk 12, J. A. Veatch sur, abn 2245 ft, salt topped at 2198 ft.

MATAGORDA COUNTY—Sheppard Mound Oil Co.'s Hawkins 2, on Hawkins ranch, Sheppard Mound, wt on dr stem 2980 ft.

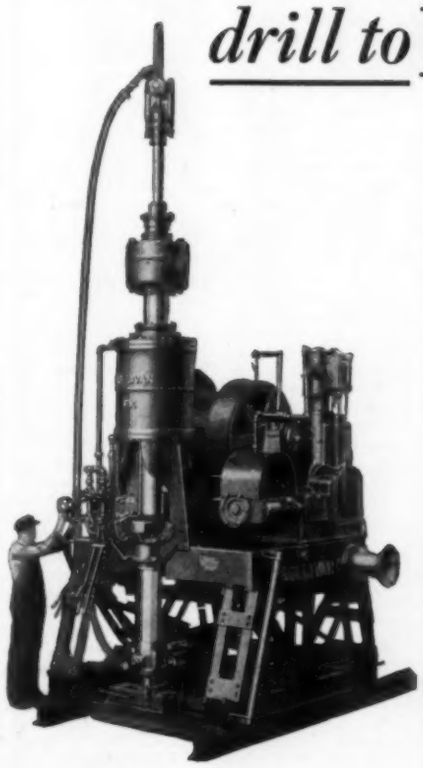
REFUGIO COUNTY — Houston Oil Co.'s O'Connor 1, Tom O'Connor ranch, Hearn sur, near Mission Bay, dr 3162 ft sandy shale.

VICTORIA COUNTY — Houston Oil Co.'s O'Connor 1, Mrs. M. V. O'Connor ranch, dr 2831 ft, sand.

WASHINGTON COUNTY—S. H. Spangler et al's Regine 1, 6 miles NW of Burton, Sandtown district on Regeine farm, sd wt on dr steam 1200 ft.

WHARTON COUNTY — Jas. W. Rich-Humphrey Oil Corp.'s Dennis 2, 5 miles NW of Wharton in blk 9, R. Kuykendall league, 30 ft S of No. 1, rigging; Brown 1, 50 ft each way from SW cor of W. Brown 20 acres, on GH& SA of James Murray sur, near Mackey, dr 75 ft, shale. Vacuum Oil Co.'s Hooper 1, 50 ft from each line in NE cor of L. M. Hooper 100-acre tract, dr 1538 ft in gumbo. Atlantic Oil Prod. Co.'s Taylor 3, 50 ft from both lines of SW cor of 20-acre lease, dr 2975 ft, salt and gyp, will plug back and test at 2927 ft; Taylor 4, 200 ft W of No. 2, rigging; Taylor 5, between 1 and 3, lcns. Humble Oil & Ref. Co.'s Hawes 1, 50 ft from both lines of NE cor of E. Hawes 74-acre tract, showing oil 2850 ft in lime; No. 5, offset to Oxford's No. 2, bldg dk; No. 6, rigging; No. 2, 200 ft SW No. 1, rigging; No. 3, 200 ft SW of No. 2, bldg dk; No. 4, rigging. Texas Co.'s Taylor 5, 200 ft SW of No. 4 and offset to Sinclair No. 1, dr 2875 ft in gumbo and lime; Taylor 6, 100 ft NE No. 4 and 100 ft SE of Atlantic's No. 1, drilling into oil sand 3025 ft; Taylor 7, 200 ft SW of No. 5, dr 2500 ft in gumbo; Floyd 1, NW of Taylor 3, on M. S. Floyd 56 acres, ready to spud; Taylor 8, lcn. Sinclair Oil & Gas Co.'s Taylor 1, 50 ft out of SE cor of 5-acre tract and offset to Atlantic's No. 1, set screen 3161 ft in oil; Taylor 2, 200 ft S of Sinclair's No. 1, dr 2633 ft hard sand; Taylor 3, 200 ft S of Sun Co.'s No. 1, dr 876 ft in gumbo; Taylor 4, 200 ft S of Sinclair's No. 1, dr 1461 ft in rock; No. 5, 200 ft S of No. 4, bldg dk; No. 6, 200 ft S No. 3, lcn. Sun Co.'s Taylor 1, 50 ft from each line out of SE cor of 5-acre tract, flowing 100 bbls; Taylor 3, 200 ft S No. 1, dr 801 ft in gumbo; Taylor 4, 200 ft S No. 3, dr 117 ft in gumbo; Taylor 2, 50 ft out of NE cor of NW 5-acre tract and offset to Atlantic's No. 3, wt on cement to set 2917 ft; No. 5, offset to Vacuum's Hooper 1, rigging; No. 6, 200 ft S of No. 4, lcn. Oxford Oil Co.'s Autrey-Floyd No. 1, NW of Humble-Gulf 124 acres, 50 ft S and W of NE cor of Floyd 11 acres, S. F. Austin league, oil sand 2820 ft; No. 2, 250 ft S No. 1, dk; No. 3, 230 ft S No. 2, lcn. Nelms et al's Bay 1, 5900 varas NE along NW line and 1000 varas at right angles with said line, sdtr 805 ft; Morris 1, 2100 varas NE along NW line of W cor and 2100 varas at right angles with said line, sd 625 ft. Gulf Prod. Co.'s Borden 1, on A. P. Borden 600-acre tract in SE cor, near Mackey, dr 3400 ft in gumbo; Chase 1, 500 ft to S and 50 ft to W line of E. M. Chase 60-acre tract off Boling dome,

"--and so we shipped this drill to RUSSIA



The Soviet Government is a keen buyer. It has to be shown VALUE before it selects.

Soviet engineers came to the United States to buy an oil drill for a particularly tough job.

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To get core
To handle heavy pressure
To avoid sealing off oil sand.
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Diamond Core Drill

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Chicago

Stephen F. Austin league, abn in anhydrite 2703 ft. Houston Gulf Gas Co.'s Woodfin 1, 5400 varas NE along NW line and 500 varas S at right angles of said line in John Huff sur, sd 743 ft.

CALCASIEU PARISH—Vacuum Oil Co.'s Farquhar 3, 175 ft W and 100 ft N of SE cor of SW¼ sec 9, set 12½-inch cas 1298 ft; Freiberg & Wolfe 1, 780 ft S and 685 ft E of NE cor of SW¼ of sec 9, changing rig 4669 ft; Freiberg & Wolfe 2, 200 ft each way out of NE cor, r 3121 ft; Bordages 2, 500 ft W and 200 ft N of SE cor of N½ of NW¼ sec 9, cored oil 3778 ft; Miller 5, 300 ft N of SW cor of NW¼ sec 10, will deepen 4433 ft; Miller 6, 475 ft N and 11 ft W of center of sec 9, cored oil 4370 ft; Miller 7, 500 ft W of No. 3, 1909 ft in sand, coring; Miller 8, 400 ft N of No. 4, dr 2386 ft in rock; Miller 9, 400 ft N and 100 ft E of No. 4, dr 2349 ft in sand rock.

ST. MARTIN'S PARISH — Rycade Oil Corp.'s Atchafalaya 1, 18-9s-9e, near Bayou Bullion dome, dk.

ST. MARY'S PARISH—Rio Bravo Oil Co.'s Glenwild 1, Glenwild 4500-acre farm, dr 3418 ft.

Texas Panhandle District

COMPLETIONS

Company, Well and Location	Initial Production Bbls	Depth
Hutchinson County—		
Hutchinson County Oil Co. Smith 1	30	3017
Wheeler County—		
Mid-West Exploration Co. W. C. Company 1	*	2985

DRILLING REPORT

CARSON COUNTY—Amarillo Oil Co.'s L. Bivins 3-B, making 60 million ft gas, sr hole 3000 ft. Amatex Dev. Co.'s E. S. Poling 1, rotary rig. American Ref. Co.'s Burnett 6, sd 2092 ft. B. S. Barnes et al's Burnett 1, sd 1150 ft. J. S. Cosden et al's Burnett 1, making 70 million ft gas, dr 2710 ft. Culbertson Bros. & Co.'s Burnett 1, making 25 million ft gas, dr 2755 ft. Gates Oil Co.'s Burnett 2, sd 2960 ft. Gulf Prod. Co.'s Burnett 10, fsh 2275 ft; Burnett 11, rig. Magnolia Pet. Co.'s Burnett 1-A, dr 1630 ft. Marland Oil Co.'s Burnett 5, rig; Burnett 1-A, dr 2665 ft; Burnett 1-B, dr 1585 ft. McFarland & Thomas' G. W. Witter 1, dk. The Texas Co.'s M. C. Burnett 4, dr 2800 ft. Young & Patrick's J. C. McConnell 1, rig.

COLLINGSWORTH COUNTY—Continental Oil Co.'s Hughes 1, dr 3225 ft.

COTTLE COUNTY—National Potash Co.'s Dulaney 2, (core test) dr 1575 ft.

DALLAM COUNTY—James et al's James 1, sd 2500 ft.

GRAY COUNTY —Anderson-Brock et al's Beavers 1, sd 3800 ft. Clark-Baldridge et al's Morten 1, rig. Empire Gas & Fuel Co.'s H. Heithott 1, dr with oih 3176 ft. The Texas Co.'s W. J. Brown 1, spd and sd; G. H. Saunders 2, fsh 610 ft. H. F. Wilcox et al's Coombs-Worley 2, dr rotary 1965 ft; Worley-Reynolds 2, sd to cement cave, td 2865 ft.

HALL COUNTY—Hudspeth-Taylor et al's T. R. Fuston 1, sd 1645 ft.

HUTCHINSON COUNTY— American Ref. Co.'s G. A. Whittenburg 1, dr 2370 ft. Badger Oil Co.'s Tom Lewis 1, dr 720 ft. Bear Creek Oil Co.'s E. E. Watkins 1, rig. Canadian River Oil Co.'s (Jim Whittington) Kingsland 2, 3 and 4, rigs. Canyon Oil Co.'s Whittenburg 1, dr by tools 2335 ft; Whittenburg 2, sd 2800 ft; Whittenburg 3, lcn. Centerfield Oil Co.'s Smith 1, sd 2915 ft. Walter Cline & Douglas Oil Co.'s J. A. Whittenburg 1, dk. Cockrell-McIlroy Oil Co.'s Smith 1, spudding; Smith 2, rig. Jack Crosbie et al's J. A. Whittenburg 1, fsh 2755 ft. Currie Bros. & J. R. Phillips' Smith 1, set 8¼-inch cas 2840 ft. Dixon Creek Oil Co.'s Smith 3, dr 515 ft; Smith 4, spudding; Smith 5, rig. Dunnigan et al's Whittenburg 1, dr 2800 ft. Fly-Blackburn Oil Co.'s Weatherly 1, rig. Gates Oil Co.'s W. L. Kingsland 1-A, spudding; Kingsland 2, spudding; Kingsland 3 and 4, dks. Gubson Oil Corp.'s Johnson 1, rig. Golding & J. R. Phillips' J. T. Hodges 1, dr 645 ft. Gulf Prod. Co.'s E. Cockrell 1, ur cas 2924 ft; Dial et al 6 and 7, dks; J. A. Whittenburg 2, rig. W. S. Heywood et al's E. Cockrell 1, spudding. W. H. Holmes et al's Smith 1, dr 2420 ft; Smith 2 and 3, rigs. W. L. Kingsland et al's Fee 1, lcn. J. H. Lenix et al's Johnson 1, dk. Lucky Ten Oil Co.'s Smith 1, rig. McIlroy & Herring's Smith 2, rig. McIlroy Oil Co.'s Smith 3, rig. McMan O. & G. Co.'s Johnson 1, rig. J. H. Middleton et al's Weatherly 2, sd for shot 3248 ft; Smith 1 and 2, rigs. A. D. Morton et al's Johnson 1, rig. Native Oil Co.'s Johnson 1, sd making oil, td 2970 ft. Newby Oil Co.'s E. Cockrell 1, dr 2140 ft. New Domain O. & G. Co.'s Kingsland 1, rig. Pattison Oil Co.'s (was Lenix-Stover) Smith 1, dr 2865 ft. J. R. Phillips et al's Weatherly 1, dr 2900 ft; Kinglsand 3, lcn. J. R. Phillips & Heywood's Smith 1, spudding. Phillips Pet. Co. and Drysdale Oil Corp.'s Weatherly 1, set 8¼ inch cas to test small show oil at 2968-3115 ft. Phillips Pet. and Gibson Oil Corp.'s G. A. Whittenburg 2, dr 2115 ft; J. A. Whittenburg 1, swabbing 150 bbls 41 gravity oil 2903-41 ft; J. A. Whittenburg-Whitley 1, lcn; Kingsland 1, set 15½-inch cas 450 ft. Phillips Pet. & McMillen et al's J. A. Whittenburg 1, dr in gas 2655 ft. Phillips Pet. & Pulaski Oil Co.'s J. A. Whittenburg 1, dr 2490 ft; Whittenburg 2, dr 2280 ft; J. A. Whittenburg (Sec. 12) 1, dk; Smith 1-A, dr 1215 ft; Smith 2, sd for storage and shot with oih 2930-85 ft; Smith 3, dr 1930 ft; Smith 4, dr 415 ft; Johnson 1, dr 1080 ft; E. Cockrell 1, co 2200 ft. Phillips Pet. Co. et al's Johnson 1, cem 6⅝-inch cas 2917 ft. Phillips Pet. Co. and South Hutchinson Oil Co.'s Whittenburg 2, sd 2880 ft; Whittenburg 3, sd 2285 ft. Prairie O. & G. Co.'s Weatherly 2, co 2025 ft. Prairie & T. P. Coal & Oil Co.'s Johnson 1, testing oil pay 2945-69 ft. W. R. Ramsey et al's Johnson 1, dr 1345 ft. Relief Oil Co.'s Smith 1, dr 410 ft. Roxana Pet. Corp.'s Smith 2 and 3, rigs; Smith 1-B and 2-B, rigs. Skelly Oil Co.'s Johnson 1, rig; Johnson 1-A, rig; J. A. Whittenburg 1, dr 2410 ft; Whittenburg 2, dr 1225 ft; Whittenburg 3, dr 745 ft; Whittenburg 4, dr 1000 ft. J. L. Smith & Bynum's J. A. Whittenburg 1, dr 1510 ft. Smith & Wilbanks' Wm. Lyal 1, rig. Spring Creek Oil Co.'s Smith 1, spudding. Summit Oil Co.'s J. A. Whittenburg 1, showing oil, dr 2935 ft. Ryan Consolidated Pet. Co.'s Johnson 1, rig. The Texas Co.'s Burnett 7, dr 410 ft; E. Cooper 1, dr 1675 ft. Triangle Oil Co.'s Smith 1, dr 465 ft. Tex-O-Oil Co.'s Johnson 1, dr by tools 2740 ft. Twin-Six Oil Co.'s Kingsland 2, fsh 2435 ft; Kingsland 3, spd and sd; Kingsland 4, fsh tools 2760 ft. J. D. Ward et al's E. Cockrell 1, sd 800 ft. Westex Oil Co.'s Whittenburg 1, dr 2885 ft; Whittenburg 2, set cas 2820 ft. White Eagle O. & R. Co.'s Smith 1, dr 2140 ft; Smith 2 and 3, rigs; Smith 4, lcn; J. A. Whittenburg 1, dk; Johnson 1, dr 520 ft. Winner Oil Co.'s J. E. Pritchard 1, dk. W. W. Silk et al's Jarvis 1, lcn at C SE¼ Sec. 95, T&NO Ry survey, Blk. 5T.

MOORE COUNTY—Amarillo Oil Co.'s R. B. Masterson 2-A, making 30 million ft gas, dr 2505 ft. M. Cadman-Martin et al's Sneed 1, dk. Clark-Baldridge et al's Sneed 1, rig. Brookins-Flowers & Marland Oil Co.'s Sneed 1, dk. Landreth Prod. Corp.'s Sneed 1, dk.

POTTER COUNTY—Amarillo Oil Co.'s L. Bivins 4-A, dr granite 2905 ft. Prairie O. & G. Co.'s Bivins 1, dr granite 2885 ft.

ROBERTS COUNTY—Phil Engle et al's Lederick 1, sd 4020 ft. W. M. Shriner et al's T. S. Jones 1, lcn.

SWISHER COUNTY—Overson & Keagans' L. M. Woodward 1, sd 555 ft.

WHEELER COUNTY—Canadian Oil Co.'s H. C. Phillips 2, lcn. Mid-West Exploration Co.'s G. W. Porter 1, rig. Hal Vaughan et al's O'Gorman Bros. 1, dk.

Central West Texas Wildcats

COMPLETIONS

Company, Well and Location	Initial Production Bbls.	Depth
Crockett County—		
Carl Cromwell et al L. P. Powell 1	360	2665
Culberson County—		
M. A. Grisham et al Grisham 1 ..	*	3420
Tom Green County—		
Church-Field et al Williams 1	*	3010
King County—		
The California Co. R. B. Masterson 1	*	3520
Mitchell County—		
Atlantic Oil Prod. Co. Adams 3 ..	80	3075
The California Co. Morrison 15 ..	70	3040
Reagan County—		
Big Lake Oil Co. University 37-A..	700	2430
University 58 4000		2916
University 59 1000		2938

DRILLING REPORT

COKE COUNTY — Lipan Oil Co.'s E. C. Rawlings 1, set 15½-inch cas 448 ft.

CONCHO COUNTY—R. C. Dutton et al's Schultz 1, dr 405 ft. Kemper Kimberlin et al's Schultz 1, spudding.

CRANE COUNTY—Cordona Oil & Potash Co.'s Cowden 1, sd 3571 ft. J. S. Cosden et al's Connell 1, spd and sd. Church-Fields et al's Cowden 1, top salt 1145 ft, dr 2480 ft. Gilliam-Logan Oil Co.'s W. H. Penix 1, dk. Independent Oil & Gas Co. & Turman-Maxwell's Len Taylor 1, elevation 2476 ft, top salt 450 ft, flowing by heads 2038-40 ft. Marland Oil Co's Cowden 1, elevation 2490 ft, top salt 800 ft, dr 2220 ft. Penn-Texas Dev. Co.'s Cowden 1, dr 3050 ft. Texas Dev. Co.'s Cowden 1, dr 3745 ft. F. P. Zoch et al's S. Keith 1, elevation 2594 ft, top salt 728 ft, fsh 1660 ft.

CROCKETT COUNTY—J. S. Cosden et al's Noelke 1, elevation 2332 ft, sd 1950 ft. Carl Cromwell et al L. P. Powell 2, rig. Crockett Drilling Synd.'s Shannon 2, dr 2195 ft; Shannon 3, lcn. Cumberland O. & G. Co. et al's Couch 1, spd and sd. Gulf Prod. Co.'s L. P. Powell 1, rig. Humphreys Corp.'s University 1, dr 3165 ft. Humble O. & R. J. P. Sorg 1, elevation 2757 ft, top salt 1130 ft, top lime 2594 ft, testing oil pay with 1600 ft fluid in hole 2265-80 ft. Humble & Marland's L. P. Powell 4, dk. J. K. Hughes et al's L. P. Powell 1, dk. Magnolia Pet. Co.'s J. M. Shannon 1, elevation 2640 ft, top salt 993 ft, dr 2165 ft. Marland Oil Co.'s J. S. Todd 1, rig. Marland & Republic Prod. Co.'s J. S. Todd 1, plugging back from contract depth 3201 ft for shot. Wm. Schaffer et al's University 1, sd 1365 ft. The Texas Co.'s (was J. C. Cooke et al) J. S. Todd 1, sd 1705 ft.

CULBERSON COUNTY — Deep Rock Oil

WERNER TUBING PROTECTORS

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Save Sucker Rods

Save Shutdown, Time

Save Oil

SAVE MONEY

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Mexia Planing Mill Company, Inc.

Mexia, Texas

Over 88,000 sold in 1925

Co.'s TP Fee 1, lcn. Pure Oil Co.'s Quaid 1, co 1900 ft.

JEFF DAVIS COUNTY—Herbert Oil Co.'s T. M. Wingo 1, sec 20, blk G-25, dr 2230 ft. Humble O. & R. Co.'s W. W. McCutcheon 1, rig.

ECTOR COUNTY—J. C. Cooke et al's Henderson 1, lcn.

GARZA COUNTY—Deep Rock Oil Co.'s S. M. Swenson 1, sd 1620 ft. Emerald Oil Co.'s Connell 1-A, sd 3200 ft; J. M. Boren 1, dd, co 2453 ft. Mid-West Exploration Co.'s N. N. Rogers 1, rig.

GLASSCOCK COUNTY—Case & Hoover's W. H. Sparkman 1, dr 2285 ft. Mascho & Marland Oil Co.'s Nellie Calder 1, fsh 1285 ft. Choate-Henshaw & Marland's Neal 1, sd 2534 ft.

TOM GREEN COUNTY—M. B. Bryant et al's Llano Fee 1, fsh 435 ft. Penn-Windsor et al's H. Turner 1, sd 1910 ft. Roxana Pet. Corp.'s L. T. Clark 1, dr 1960 ft.

HOWARD COUNTY—Deep Rock Oil Co.'s Scott-Hyman 1, sd 3445 ft. Hyer et al's H. R. Clay 1, sd 1565 ft. Choate-Henshaw & Marland's O'Daniel 1, pumping oil and water 3103 ft. Owen-Sloan Oil Corp.'s Otis Chalk 1, dr 1015 ft. Transcontinental Oil Co.'s Ora Roberts 1, sd 630 ft.

IRION COUNTY—Oklavania Oil Co.'s Sawyer 1, dr 1935 ft. Orient Oil Co.'s J. D. Sugg 2, spd and sd. P. H. Williams et al's Ashe Bros. 1, spd and sd.

KENT COUNTY—The Texas Co.'s Barron 1, dr 2475 ft.

KING COUNTY—Mascho & Winters' Frank Patton 1, lcn.

LOVING COUNTY—Lockhart & Co.'s W. D. Johnson 1, sd for cas 3375 ft.

LYNN COUNTY—Hart Oil Corp.'s C. O. Edwards 1, fsh 200 ft.

MITCHELL COUNTY—Atlantic Oil Prod. Co.'s Adams 4, dr 2780 ft. The California Co.'s C. M. Adams 2-B, spd; Pail Elder 5, dr 2720 ft; Miller 5-A, dr 2910 ft; Womack 3, testing 2900 ft; Womack 4, dr 250 ft; Womack 5, dk. Eastland Oil Co. & Gulf's J. J. Handley 1, dr 1830 ft; Adams 1, dr 2895 ft. Mid-Kansas O. & G. Co.'s Ellwood 1, sd 2370 ft. Marland Oil Co.'s Shumaker 1, trace oil 2495-2509 ft, cemt. cas 2675 ft. Magnolia Pet. Co.'s A. P. Watson 1, dr 400 ft; L. Coleman 1, sr 3205 ft; F. Adams 1, dr 2715 ft; C. M. Adams 3, dr 1890 ft; TP Fee 1, water trouble 825 ft. Morrison-Thompson's Scott 1, sd 1440 ft.

PECOS COUNTY—Adams Oil Co.'s Gray 1, sd 1135 ft. Dixie Oil Co.'s Mrs. Hersheusen 1, dr 3440 ft. Levi Smith et al's Devlin 1, spd. Transcontinental Oil Co.'s Perry 1, sd 2100 ft. Trans-Pecos Oil Co.'s Bennett 2, spudding.

PRESIDIO COUNTY—Hadlock & Miller's Tootle 1, sec 123, D & B Ry sur, blk 3, dr 2055 ft.

REAGAN COUNTY — Big Lake Oil Co.'s University 20-A, swabbing water 2455 ft; University 25-A, co 2480 ft; University 51, dr 2540 ft; University 56, dr 2720 ft; University 57, fsh 2655 ft; University 58, flowing 200 bbls oil per hour 2865-2916 ft; University 60, testing cas 2800 ft; University 61, dr lime 2780 ft; University 62, pull cas 2840 ft; University 63, dr 665 ft; University 64, dr 265 ft; University 65, dr 1060 ft; University 66, dr 900 ft; University 67, dr 360 ft. H. D. Camp et al's University 1, sd 750 ft. Marland Oil Co.'s J. T. Cole 1, rig. Mascho & Marland's Sawyer Cattle Co. 1, dk. Marland & F. P. Zoch's J. A. Talley 1, spd and sd. Simon et al's R. A. Walters 1, dk. Peer Oil Corp.'s Sawyer 1, hfw 2700 ft. L. V. Tannehill et al's University 1, sd with hfw 2505 ft. The Texas Co.'s J. D. Sugg 1, spd. Texon Oil & Land Co.'s University 1-B, dr 1310 ft; University 38, dr 220 ft; University 39, dr 500 ft; University 40 to 45, rigs.

REEVES COUNTY—Owen-Sloan Oil Corp. & Deep Rock Oil Co.'s M. W. Tatum 1, sd 3505 ft. Humble O. & R. Co.'s TP Fee 1, dr 305 ft. World Oil Co.'s TP Fee 1, trace oil and gas 2925-32 ft, dr dry hole 2960 ft. Schooler-Slack et al's TP Fee 1, dr 405 ft.

SCURRY COUNTY—E. E. Fogelson's Bryce 1, dr 1765 ft. Lockhart & Co.'s S. H. Newman 1, show oil 1775-85 ft, dr 1845 ft. Northwest Co.'s H. P. Welborn 1-A, dr 175 ft.

STONEWALL COUNTY — Arkansas Fuel Oil Co.'s Craft 1, dr 3315 ft. Swenson Oil Corp.'s Ward 1, dr 3180 ft.

STERLING COUNTY—The California Co.'s J. T. Davis 1, lcn. Co-Operative Dev. Co.'s E. W. Douthitt 1-A, sd 1655 ft. Chicago-Texas O. & G. Co.'s Durham 1, dr 3055 ft. Chas. Harty et al's Reynolds-Harty 1, dr 2990 ft. Deep Rock Oil Co.'s L. T. Clark 1, sd 1290 ft. G. M. Richardson et al's J. S. Johnson 1, lcn. H. D. Rummel et al's Clark 2, sd 925 ft. C. J. Wrightsman et al's Collins 1, crooked hole 1900 ft.

SUTTON COUNTY — Chesapeak Oil Co.'s Clarkson-Allison 1, set 12½-inch cas past tools, dr 615 ft.

TAYLOR COUNTY—Sanger O. & R. Co.'s R. H. Anderson 1, sd showing oil and gas 1890 ft.

UPTON COUNTY — Big Mesa Oil Co.'s University 1, sd 3095 ft. Choate-Henshaw & Marland's Noelke 1, sd 430 ft. Dixie Oil Co.'s Burleson 1, putting on pump with 1650 ft oih after shot 2185-2230 ft; Burleson 2, rig. W. W. Donnelly & E. L. Hults' H. M. Halff 1, elevation 2808 ft, dr 1150 ft. J. A. Germany et al's H. M. Halff 1, elevation 2652 ft, top salt 1414 ft, dr 3005 ft. Independent O. & G. Co. Co.'s Burleson 1, co with 1650 ft oih after shot, td 2231 ft. Kirby Pet. Co.'s Union 1, dr 3305 ft. Marland Oil Co.'s Burleson 1, 2, and 3, lcns; Sanger Bros. 1, top salt 575 ft, dr 2080 ft; Sanger 2, lcn. Plateau Oil Co.'s Union 1, co to deepen, td 2234 ft. Republic Prod. Co. & Marland Oil Co.'s Baker 1, pumping 50 bbls oil and some water, td 2232 ft. The Texas Co.'s Union 1, top salt 710 ft, dr 1950 ft. F. P. Zoch et al's Union Fee 1, flowing sulphur water 2600 ft; E. P. Ruhman 1, dr 1180 ft. Tidal Oil Co.'s Union Fee 1, dk.

WARD COUNTY—Gulf Prod. Co.'s Hutchings et al 1, fsh tools in lime 3825 ft. Chesapeak Oil Co.'s J. Edgar Marston 1, dr 780 ft.

WINKLER COUNTY—R. A. Westbrook & Co.'s T. G. Hendrick 1, spd and sd.

A QUICK FISHING JOB is not mostly luck

The right tools in the rig, ready for an instant run, before the mud settles, is wise forethought.

THE "B-R" PACKING OVERSHOT

has made enviable records in deep well fishing time and time again. While it catches "lost pipe" in a "twist-off" LIKE ordinary overshots, UNLIKE them it permits an oil or water circulation that assures a doubly quick finish of the fishing job. This tool has been used extensively in deep well fishing. Many jobs have been loosened with it under pressures as high as 1200 pounds for periods ranging from 12 to 24 hours.

It is also a most effective packing-off tool, a double-duty servant, available as an overshot either with or without the packing assembly. To fortify each drilling well with a Baash-Ross Packing Overshot is just plain common sense.

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PERMITS GRANTED FOR NEW WELLS

TEXAS

Archer County—Roy I Carter, Wichita Falls, M. F. Martin 1, H. Grooms sur, 150 ft to S and W lines. Mahlstedt Oil Co., Ft. Worth, J. Fuch 1, S 3, Hooper & Wade sur, 150 ft to N and 200 ft to W line. Texas Co., Wichita Falls, H. O. Prideaux 2, J. Dorsey sur, 150 ft to N and 458 ft to E line; R. E. Hill 19, 2408 TE&L sur, 1028 ft to W and 953 ft to S line. Wilson Drilling Co., Wichita Falls, A. P. Nichols 1, B 40, Amer. Trib. sur, 150 ft to N and E lines. Empire Gas & Fuel Co., Staley Bldg., Wichita Falls, L. F. Wilson 1, Wm. Walker sur, east central. Perkins & Cullum, Wichita Falls, J. L. Anderson 12, B 22, Anderson sur, 300 ft E No. 5. McCarty Oil Co.'s Bob Waggoner Bldg., Wichita Falls, L. F. Wilson 7-C, Amer. Trib. sur, 300 ft W No. 6. Roxana Pet. Corp., South Bend, J. Krueger 4, 2434 TE&L sur, 800 ft to S and 150 ft to W line; Cockrell 2, 2433 TE&L sur, 150 ft to S and W lines. Staley & Wynne, Staley Bldg., Wichita Falls, A. Parrish 4, B 82 Amer. Trib. sur, 150 ft to S and E lines; Kemp & Kell 1, S 6, SP Ry sur, 150 ft to S and E lines. Shasta Oil Co., Wichita Falls, C. Mangold 7, B 21, Lazarus sur, 302 ft E No. 4. Camp Oil & Gas Co., Wichita Falls, J. D. Farmer 1, Meade sur, 150 ft to N and 450 ft to W line. Sun Oil Co., Dallas, C. E. Graham 1, J. J. Young No. 2 sur, 150 ft to N and E lines. Shaw & Rathke, Wichita Falls, W. O. Hayter 6, 1598 TE&L sur, 450 ft to N and 533 ft to E line; E. A. Hausler 1, J. Standiford sur, 150 ft to N and W lines. Gulf Production Co., Ft. Worth, L. W. Kunkel 6, 1593 TE&L sur, 300 ft W No. 5; A. P. Nichols 25, S 37, Amer. Trib. sur, 300 ft W No. 23; Power Banking Co. 2, S 123, Amer. Trib. sur, 150 ft to S and W lines; 3, 355 ft N No. 1.

Brown County—Scoggin & Loving, Brownwood, J. L. Matlock 1, J. K. Blish sur, 500 ft to W and 200 ft to S line. J. B. Alford, Mercantile Bank Bldg., Dallas, H. L. Leach 1, M. M. Flores sur, 450 ft to N and 150 ft to W line; 2, 1350 ft to N and 450 ft to W line. S. C. Herring, Cross Plains, J. R. Prater 1, W. L. Swain sur, 475 ft to N and 160 ft to E line. States Oil Corp., Eastland, J. H. Allen C-1, 789 J. Delgado sur, 150 ft to N and W lines. Marland & Godley Oil & Gas Co., Brownwood, S. M. Parks 2, J. Thoms sur, 500 ft N No. 1. Texas Co., Cisco, B. F. Dunn 1, 789 J. Delgado sur, 150 ft to N and E lines. Mook-Texas Oil Co., First Nat. Bank Bldg., Ft. Worth, J. W. Newton 2, W. B. Travis sur, 756 ft to W and 200 ft to S line.

Bastrop County—Kennon & Turner, Elgin, O. Schuerman 4, C. Standifer sur, 150 ft to center of S line.

Bexar County—H. A. Pagonkoff, Maverick Bldg., San Antonio, M. Covell 2, No. 4 sur, 1300 ft W No. 1.

Callahan County—H. M. Henderson, Box 16, Breckenridge, J. S. Burnam 5, 2288 TE&L sur, 450 ft to N and 150 ft to W line. Canyon Oil & Gas Co. and Cromwell Oil & Gas Co., Cross Plains, J. W. Harris 17-A, J. Sanders sur, 600 ft E No. 16-A (Coleman County); 18-A, 1200 ft S No. 17. Shertzer Bros., Cisco, Shackelford 13, 2270 TE&L sur, 300 ft W No. 12. Shaw & Rathke, Wichita Falls, G. Anthony 5, S 1, D&D Asy sur, 80 ft N No. 4. St. Mary's Oil & Gas Co., St. Mary's, W. Va., S. M. Eubanks 10, 2287 TE&L sur, 550 ft to W and 150 ft to S line. Western Oil Sales Corp. and A. Cohen, 733 W. French Place, San Antonio, J. Newman 29, S 8, D&D Asy sur, 150 ft E No. 4. Wise & Jackson, T. E. Wylie 1, B 4, D&D Asy sur, 150 ft to N and W lines. Sprawls & Harwell & Cook, Box 712, Abilene, H. Wagley B-1, S 3, D&D Asy sur, 150 ft to S and W lines. W. R. Andrews et al Putnam, R. D. Williams 52, 2973 TE&L sur, 875 ft to N and 450 ft to W line. J. B. Peacock, Dallas, J. A. Yarbrough 4, 2971 TE&L sur, 300 ft to N and 1543 ft to E line. T. G. Shaw et al, Dan Waggoner Bldg., Ft. Worth, A. W. Warren 1, 2039 TE&L sur, 450 ft to N and 150 ft to E line. Sprawls, Harwell & Cook, Abilene, H. Wagley 13, S 2, D&D Asy sur, south central. Canyon Oil & Gas Co. and T. B. Slick, Cross Plains, S. C. Barr 4, W. G. Anderson sur, 300 ft S No. 2. M. A. White et al, Box 301, Putnam, A. W. Warren 5, 2039 TE&L sur, 200 ft S No. 4. Shaw & Rathke, Wichita Falls, G. Anthony 6, S 1, D&D Asy sur, 300 ft W No. 3.

Coleman County—Canyon Oil & Gas Co., Cross Plains, O. M. Parson 1, R. Rodriguez sur, 150 ft to N and W lines. Burk-Greis Oil Co. & Gwinnup, Cisco, J. C. Dibrell 4, J. W. Hicks No. 265 sur, 250 ft to N and W lines. Goldrick Bros. et al, Box 174, Cisco, W. Neeb 1, S 33, CCSL sur, 150 ft to S and W lines. Ell Evans, Cisco, M. G. Walker 1, W. T. Dunlavy sur, 200 ft to S and E lines. Archie Shaw, Burkett, W. T. Burns 3, A. Wickson sur, south of No. 2. Canyon Oil & Gas Co. and Cromwell Oil & Gas Co., Cross Plains, J. W. Harris 17-A, J. Sanders sur, 600 ft E No. 16-A; 18-A, 1200 ft S No. 17.

Clay County—Midwest & Gulf of Texas, Magnolia Bldg., Dallas, W. L. Seawell 8, B 4, PCSL sur, 534 ft to S and 150 ft to E line. Howard Pet. Corp., Box 1683, Tulsa, Okla., M. K. Inman 1, W. H. Spotts sur, 1320 ft to W and 660 ft to N line.

Crockett County—Marland Oil Co., W. T. Waggoner Bldg., Ft. Worth, J. S. Todd 1, S 25, B WX, GC&SF sur, 330 ft to S and W lines.

Cooke County—Jno. W. Hooser, Dallas A. Hyman 1, T. J. Moss sur, 455 ft to N and 700 ft to E line.

Caldwell County—C. N. White, 120 W. Park Ave., San Antonio, F. A. Cardwell 4, 450 ft to E and and 150 ft to S line. Witherspoon Oil Co., San Antonio, M. L. Brewer 12, F. Castillo sur, 150 ft to S and W lines.

Duval County—Cole Pet. Co., Laredo, M. Arispe 17, S 11, B 13, 155 ft to SE and 505 ft to SW line; 18, 310 ft NE No. 17; 19, 350 ft NE No. 18.

Eastland County—Kirk & Brewer, Gorman, J. W. Blackwell 1, McLennan CSL sur, 900 ft to W and 800 ft to N line.

Falls County—C. J. Stewart, Brint, Ala., W. H. Earls 1, J. A. Manchaca sur, 182 ft to E and 160 ft to S line.

Htuchinson County—Douglas Oil Co., Atlas Bldg., Tulsa, Okla., J. A. Whittenburg 1, S 15, H&OB Ry sur Blk. X02, 660 ft to S and W lines. Phillips Pet. Co., Bartlesville, Okla., Pulaski 1, S 12, Blk. Y, M&C sur, 330 ft to S and W lines. Lucky Ten Oil Co., National Bank of Commerce, Amarillo, SW¼ of NE¼ 1, S 11, B Y, M&C sur, 330 ft to N and W lines. J. R. Phillips, Panhandle, J. R. Phillips 1, S 14, B Y, M&C sur, 430 ft to N and 330 ft to W line. Canadian River Oil Co., Amarillo, W. L. Kingsland 2, S 4, Blk. Y, 1320 ft E No. 1. Roxana Pet. Co., South Bend, H. E. Smith 3, S 14, BY, M&C sur, 330 ft to S and 990 ft to E line.

Hardin County—Yount-Lee Oil Co., Beaumont, Gilbert 3, S. Jackson sur, south central part of Blk. 7. East Batson Oil Co., Batson, State Land 12, Copley sur, 25 ft to W and 341 ft to S line. Paggi Bros. Oil Co., Beaumont, E. Alvey 1, M. E. Hopkins No. 2 sur, 75 ft to N and 350 ft to W line.

Harrison County— Industrial Gas Co., Marshall, C. M. Abney 4, T. D. Wilson sur, 255 ft to N and 473 ft to E line.

Harris County — Sun Oil Co., Beaumont, Bartlett Oil Co. 18, A. Smith sur, 250 ft S No. 17; R. L. Blaffer 31, R. Dunman sur, south of No. 27.

Hill County—Eagle Production Co., Lockhart, J. T. Jones 1, BBB&C Ry sur, 750 ft to E and 150 ft to S line.

Jack County—O. R. Rochell, 673 NW Fourth Ave., Mineral Wells, I. D. Grey 1, J. W. Ramsey sur, SE cor.

Jim Hogg County—Rydal Oil Corp., Texas Nat. Bank Bldg., San Antonio, T. Vela 3, No. 1, Blk. 1, 150 ft to N and W lines.

Liberty County — Republic Production Co., Houston, Dolbear 119, J. Devore sur, 2610 ft to N and 1787 ft to E line; 120, 2185 ft to E and 1000 ft to S line; 121, 4019 ft to N and 1977 ft to E line; 122, 2256 ft to N and 2337 ft to E line. Humble Oil & Ref. Co., Houston, A. Deussen 1, B 1, D. Minchey sur, 1750 ft to W and 100 ft to N line; W. Weiss (Hardin County) 1, S. Osborn sur, 8500 ft to S and 100 ft to E line; Welder 2, Wm. Duncan sur, 50 ft NE No. 1; Merchant 5, J. Devore sur, 50 ft to N and E lines; Able 6, J. Devore sur, 50 ft N No. 2; A. A. Sterling 3, J. Devore sur, 75 ft to S and 50 ft to W line.

Montague County—Wood-Benton-Lesh & McCall, Nocona, R. Hynds 4, J. J. Hall sur, 150 ft to S and E lines. Fleming & Kimbell, Har-

Weekly Comparison of New Wells

Following is a condensed table giving a comparison of permits or locations made for new wells in Kansas, Oklahoma, Arkansas, Louisiana, Texas and California:

	Number of Wells for Week Ending															
	Nov. 20	Nov. 27	Dec. 4	Dec. 11	Dec. 18	Dec. 25	Jan. 1	Jan. 8	Jan. 15	Jan. 22	Jan. 29	Feb. 5	Feb. 12	Feb. 19	Feb. 26	Mar. 5
Kansas	37	35	29	35	28	32	40	30	23	28	44	24	31	59	30	18
Oklahoma	60	106	86	73	75	95	76	78	60	92	85	71	85	100	66	140
Arkansas	10	16	10	22	11	15	10	18	10	12	13	28	11	28	13	28
Louisiana	6	15	17	15	15	7	12	15	17	20	23	23	37	23	21	32
Texas	174	126	253	203	210	199	167	111	162	153	150	146	176	201	233	170
California	25	23	23	22	42	40	17	25	28	35	35	31	34	26	35	34
Total	312	321	418	370	381	388	322	277	300	340	350	323	374	437	398	422

vey-Snider Bldg., Wichita Falls, R. Hynds 1, J. J. Wall sur, 150 ft to N and 190 ft to E line.

Medina County — W. F. Tittle, Hutchins Hotel, San Antonio, R. W. Richter 1, S 89, Rusk sur, NE corner. Buchanan & Tyrrell, Travis Bldg., San Antonio, J. P. Nixon 1, 528 M. Derungs sur, 150 ft to N and W lines. Medina Oil Co., Hondo, R. Taylor 2, S 135, A. Bruchet sur, 1012 ft to N and 382 ft to E line.

Navarro County—Sun Oil Co., Dallas, Pearce D-1, M. Boren sur, 1950 ft to NW and 200 ft to SW line.

Palo Pinto County—M. A. Whatley, Graham, Castello 1, J. P. Rohns sur, 600 ft to E and 150 ft to S line. Fulcher, Morris & Howell, Ranger, R. C. Hinkson 1, S 82, T&P Ry sur, SE corner. Upham Gas Co. of Texas, Mineral Wells, J. A. Chestnut 2, G. Green sur, 500 ft to N and 300 ft to W line.

Reagan County—Krupp & Pickrell, Big Lake, University 38, S 36, B 9, 560 ft W No. 3; 39, 535 ft N No. 3; 40, 660 ft E No. 3; 41, 660 ft S No. 3; 42, 660 ft N No. 34; 43, 660 ft W No. 32; 44, 660 ft W No. 13; 45, 535 ft W No. 2.

Shackelford County—Humble Oil & Ref. Co., Houston, W. I. Cook 1, S 84, ET Ry sur, 150 ft to S and E lines. Snyder, Moutray & Sons, Box 577, Cisco, L. M. Griffith 5, S 37, LAL sur, 300 ft E No. 1. Dr. C. W. Wallace, Wichita Falls, G. E. Waters 49, B 36, Univ. Lands sur, 150 ft to W and 450 ft to S line. J. S. Dennis, Moran, A. J. Thomas 9, S 58, Univ. Lands sur, 150 ft N No. 1; 8, 150 ft E No. 7; 10, 150 ft E No. 1; 11, 150 ft W No. 1; 12, 150 ft E No. 2. M. M. Dabney, Breckenridge, J. F. Pisch 7, S 7, Bayland Asy sur, 150 ft to N and 450 ft to W line. Roberts, Chadwick & Payne, Breckenridge, C. H. Arndt 4, 597 TE&L sur, 150 ft to SW and 450 ft to SE line; 5, 570 ft W No. 1.

Stephens County—Wm. Little et al, Box 777, Breckenridge, J. C. Curry 1, S 24, LAL sur, 510 ft to S and E lines; 2, 330 ft to E and 990 ft to S line. Texas Pacific Coal & Oil Co., Ranger, C. J. Winston 3-B, S 39, T&P Ry sur, 577 ft to E and 2100 ft to S line.

Swisher County—Kegans & Baker, Tulia, C. C. Wilson 1, S 7, B M-13, 235 ft to N and 1354 ft to W line.

Terrell County—E. T. Williams et al, St. Charles Hotel, Del Rio, G. M. Sowden 1, S 71, B D-10, TC Ry sur, north central.

Wichita County—F. W. Weaver, Staley Bldg., Wichita Falls, G. E. Nance 1, S. O. Fowler sur, 150 ft to N and E lines. Perkins & Cullum, Wichita Falls, Beaver-Electra Co. 6, HT&B Ry sur, 300 ft N No. 4; 7, 300 ft E No. 5. Perkins, Cullum & Hemby, Box 1020, Wichita Falls, J. Hoosier 1, 397 L. M. Collins sur, 150 ft to S and E lines. Jas. F. Long, 1714 Ninth St., Wichita Falls, W. W. Overby 1, J. M. Sharp sur, 150 ft to N and W lines. Jno. W. Hooser, Thomas Bldg., Dallas, Hines & Hearn 2, S 11, H&GN Ry sur, 150 ft to S and W lines. W. B. Omohundro, Perkins-Snider Bldg., Wichita Falls, W. H. Chilson 4, B 2, M. Ramsey sur, 50 ft E No. 3. G. R. Ridgeway, Perkins-Snider Bldg., Wichita Falls, J. L. Powell 6, S 21, H&GN Ry sur, 50 ft S No. 4. Panhandle Ref. Co., Wichita Falls, J. L. Powell 1, S 21, H&GN Ry sur. Petroleum Prod. Co., Wichita Falls, H. Willis 10, BBB&C Ry sur, 336 ft S No. 8; 11, 336 ft S No. 9. Camp Oil & Gas Co., Wichita Falls, S. R. Munden 15, J. McCool sur, 1300 ft to N and 450 ft to E line. Watt & Bridges, Box 1277, Burkburnett, J. N. George 1, O. Farris sur, 450 ft to W and 750 ft to S line. R. M. Armstrong et al, 1206 Grace St., Wichita Falls, McCormick 1, S 13, H&GN Ry sur, 200 ft to E and 750 ft to S line. W. J. Moran, Box 1477, Wichita Falls, F. P. Warren 6, 300 ft W No. 1. Staley & Wynne, Staley Bldg., Wichita Falls, H. B. Hines 2, S 11, H&GN Ry sur, 150 ft to S and E lines. Madison Oil & Gas Co., Box 554, Ft. Worth, S. B. Burnett 12, S 7, HT&B Ry sur, 150 ft to N and 450 ft to W line; 13, 150 ft to N and 750 ft to W line; 14, 150 ft to N and 1050 ft to W line. F. E. Shipley, Perkins-Snider Bldg., Wichita Falls, J. E. Hobson 2, GC&SF Ry No. 3 sur, 425 ft to N and 150 ft to W line. Ryan Pet. Co., Bartlesville, Okla., G. Nance 54, S. O. Fowler sur, 305 ft S No. 52. Sooner Oil Assn., Wichita Falls, O. L. Cook 11, S. Anderson sur, 300 ft E No. 8. E. J. Stump Co., Wichita Falls, B. F. Dutton 1, B 11, DCSL sur, 150 ft to N and E lines. Commercial Pet. Co., Staley Bldg., Wichita Falls, A. B. Edgerly 1, S 1, SA&MG Ry sur, 150 ft to N and W lines. J. A. Fisher, City Nat. Bank Bldg., Wichita Falls, Fee 1, L. M. Collins sur, 150 ft to N and 600 ft to W line.

Wilbarger County — Landreth Prod. Corp., Vernon, W. T. Waggoner Q-2, S 47, H&TC Ry sur, 479 ft E No. 1; Q-3, 220 ft to E and 150 ft to S line; NN-4, S 42, H&TC Ry sur, 440 ft E No. 1. Humble Oil & Ref. Co., Wichita Falls, W. H. Stephens 44, S 83, H&TC Ry sur, 305 ft S No. 42; 45, 310 ft S No. 44. Barbara Powers, Box 1082, Vernon, R. L. Castlebury 1, S 68, H&TC Ry sur. Texas Co., Wichita Falls, R. Guggisberg 1, S 13, BS&F Ry sur, 150 ft to S and W lines. Petroleum Prod. Co., Wichita Falls, S. A. Dill 8, S 84, H&TC Ry sur, 300 ft E No. 7. C. E. Steward, 702 Denver, Wichita Falls, J. C. Guyer 1, B 121, Waggoner Col. sur, 150 ft to N and W lines. Milham Corp. of Texas, Travis Bldg., San Antonio, W. T. Waggoner 3-B, S 31, H&TC Ry sur, 150 ft to N and E lines.

Wharton County—Murchison & Fain Oil Co., San Antonio, Floyd 2, S. F. Austin sur, 100 ft to N and 50 ft to W line. Sun Oil Co., Beaumont, A. E. Taylor 3, S. F. Austin sur, SW No. 1; 4, SW No. 3; 5, SW cor. Vacuum Oil Co., Gulf Bldg., Houston, L. M. Hooper 1, S. F. Austin sur, 50 ft to N and E lines. Humble Oil & Ref. Co., Houston, Hawes 3, S. F. Austin sur, 200 ft W No. 2; 4, SW Cor; 2, 200 ft W No. 1.

Webb County—Sun Oil Co., Beaumont, Killam-Bruni 1, Las Albercas sur, 150 ft to N and W lines. J. K. Davis Jr., City Nat. Bank Bldg., San Antonio, Puig Bros. 1, B 70, Albercas sur, 150 ft to N and E lines. Cole Petroleum Co., Laredo, M. Arispe 5, S 12, B 11, 330 ft to N and W lines.

Young County—Nash & Windfohr Oil Co., Graham, R. M. Williams 3, W. M. Morris sur, 200 ft to N and 150 ft to E line. Roxana Pet. Corp., South Bend, H. E. Neeley 1, 176 TE&L sur, 150 ft to N and E lines. Ed Carey Drill-

It's the Slot in Slotted Pipe That Counts

Section of Kobe Pipe, showing approximate size of Kobe Special 6½-inch 54-lb., and Kobe 8¼-inch 89-lb. Heat Treated Screen Casing — The Strongest Screen Pipe Ever Developed.

The Kobe Slot is a perfected scientific development, which has made Kobe Heat Treated Screen Casing the outstanding slotted pipe for oil country service from every standpoint of efficiency, economy and results.

The importance of the slot in slotted pipe cannot be over-estimated. It controls the effective screen area in the sand formation; materially affects the production of the well, efficiency and operating costs; and has a vital bearing upon oil string failures. How and why this is true is covered in detail, and graphically illustrated, by various literature which we have issued and are preparing from time to time. It contains interesting facts, of value to oil men. Your name on our mailing list will assure your receiving copies as issued, without obligation.

KOBE
Incorporated
1917 East 51st St. Delaware 7450
Los Angeles, California

ing Co., City Nat. Bank Bldg., Wichita Falls, J. W. Thomas 1, 1901 TE&L sur, 150 ft to N and 750 ft to W line.

CALIFORNIA

Brea Olinda—Birch Oil Co.'s 1-A, 2-3-10.

Coalinga—Pacific Oil Co.'s 72, 31-20-15.

Dominguez—Union Oil Co.'s Hellman 14, 33-3-13.

Inglewood—Pacific Oil Co.'s Baldwin 27, 8-2-14. Standard Oil Co.'s Vickers 2-10-10, 7-2-14

Kern County — Robert Barry's 2, 35-26-18. Joseph Stalder's 1, 12-11-23. Shell Co.'s Vedder 1, 9-27-28.

Long Beach—L. T. Edward's Hines 1, 13-4-13. Peacock & Lyons' 1, 13-4-13. Lindauer Oil Co.'s 6, 13-4-13; 7, 13-4-13. Retsof Oil Co.'s 78-A, 13-4-13. Harry Williamson's 1, 13-4-13. Julian Pet. Corp.'s Fee 1, 13-4-13; Fee 2, 13-4-13; Fee 3, 13-4-13; Bruce 1, 13-4-13; Chandler 1, 13-4-13. Halbert & Smith's 1, 13-4-13. Craig Burns & Co., Inc.'s Delaney 18, 13-4-13.

Los Angeles County—Julian Pet. Corp.'s Hellman Bank Trust 1, 19-3-14.

Midway—North American Oil Cons.' 30, 30-31-24; 36, 30-31-24; 34, 30-31-24.

McKittrick—Cymric Oil Co.'s 4, 26-29-21.

Montebello—Standard Oil Co.'s Harvey 1, 2-2-12; Howard & Smith 3, 2-2-12.

Richfield—Herndon-Hunters' 1, 29-3-9.

Sunset—Obispo Oil Co.'s 11, 32-12-23.

Simi—Hoyt S. Gale's Beardsley 2, 29-2-21.

Torrance—C. C. M. O. Co.'s Del Amo 74, 8-4-14. Shell Co.'s Redondo Comm. 1, 8-4-14.

Ventura—Shell Co.'s Gosnell 8-A, 27-3-23.

ARKANSAS

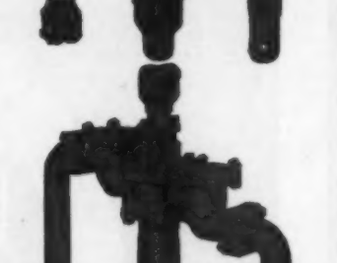
Columbia County—Magnolia Pet. Co.'s Rhinehart 8, 36-15-20, SEc NE¼ SE¼.

Nevada County—Bemis et al's Ellis 3, 2-14-21, 660 ft S and 150 ft E of NWc SE¼ SE¼. Greeson et al's Tidwell 1, 22-13-21, SWc SE¼ NE¼.

A Handy Pump In Any Field

TRANSIT

Walking Beam Pumps



Are used for pumping the oil from a well to a central tank, for emptying producers' tanks into gathering lines, or to pump water for the boilers, or the gas or oil engine. In other words, they are the handiest pumps on the lease.

All you have to do is to connect the pump by the connection pieces we furnish, to the Walking Beam on a drilling rig, or on a pumping jack.

The cylinders are bored either 2½", 3", or 3½", either plain or brass tube lined. Stroke either 18" or 24". For working pressures up to 450 lbs. 2" suction and 2" discharge flanges.

We will be glad to furnish sketches showing application.

NATIONAL TRANSIT
Pump & Machine Company

Oil City, Pa.

District Offices:

New York **Philadelphia** **Pittsburgh**
Cleveland **Tulsa** **Houston** **Denver**

Ouachita County—Buffalo Oil Co.'s Davis 2, 22-15-19, 500 ft S and 330 ft W of NEc NE¼ SW¼. J. D. Reynolds' Thompson 1, 22-15-19, SWc NW¼ SW¼. Colcord et al's Laney 5, 31-15-15, center of south line of SE¼ SW¼. Magnolia Pet. Co.'s Shirey Fee 3, 30-15-16, 140 ft S and 160 ft W of NEc NW¼ SE¼. Pure Oil Co.'s Brister 3, 28-15-16, 595 ft N and 191 ft E of SWc section.

Union County—Bailey & Trimble's Lawton 3, 10-16-15, SEc SW¼ SW¼. Broderick & Calvert's Murphy B-5, 8-16-15, SEc SW¼ SW¼. Coates & Sowell's Dumas 1, 10-17-16, NWc NW¼ SW¼. Estes et al's Murphy 2, 15-16-15, NEc W½ SW¼ NW¼. Kinnebrew et al's Williams 7, 3-16-15, 440 ft N and 150 ft E of SWc NE¼ NE¼. Magnolia Pet. Co.'s Hatfield 6, 7-16-15, NEc S½ NE¼ NE¼. Mazda Oil Corp.'s Lawton H-3, 10-16-15. Miller et al's Slaughter 1, 9-17-16, SEc W½ NW¼ NE¼. Morefield et al's Edwards 1, 2-19-18, 200 ft N and E of SWc of section. Oil Field Corp.'s Dumas 1, 10-17-16 SWc of east 30 acres of SW¼ NW¼. Olvey et al's Slaughter 1, 9-17-16, NWc S½ NW¼ SE¼. Olvey-Jones Synd.'s Slaughter 2, 9-17-16, SWc NW¼ SE¼; Slaughter 4, 9-17-16, NEc S½ NW¼ SE¼. Owens et al's Parks 2, 32-16-16, SEc NE¼ SE¼. Pure Oil Co.'s Dumas 1, 9-17-16, SEc SE¼ NW¼. Rovenger Oil Corp.'s Goodwin B-1, 16-17-16, NEc SW¼ NW¼. Simms Oil Co.'s Dumas A-3, 9-17-16, 660 ft S and 163 ft W of NEc SW¼. Unity Pet. Co.'s Lawton 2, 10-16-15, SEc NW¼ SW¼ SW¼. Wingfield et al's Slaughter 2, 9-17-16, SEc N½ NW¼ SE¼. Woodley Pet. Co.'s Bilyieu 4, 8-16-15, 590 ft N and 290 ft W of SEc SW¼ NE¼.

OKLAHOMA

Beckham County—Kadane and others No. 1 Van Vester, in the southeast corner of the northeast of the northeast of 25-8n-22w.

Caddo County — English Drilling Company No. 3 Abernathy, in the northwest corner of the southeast of the southeast of 31-6n-9w.

Carter County—Magnolia Pet. Co.'s No. 2 N. Hardin, in the center of the southwest of the southeast of the southeast of 18-1s-3w; No. 1 Moore, in the center of the southwest of the southeast of the northwest of 31-1s-3w. Humble Oil & Ref. Co.'s No. 4 Lusk, in the center of the southeast of the southeast of the northeast of 33-1s-3w. Magnolia Pet. Co.'s No. 2 Snyder, in the center of the southeast of the northwest of the southwest of 34-1s-3w; No. 4 Fish, in the center of the southwest of the northeast of the southwest of 34-1s-3w. Schermerhorn Oil Co.'s No. 2 Cruce, in the center of the southwest of the southeast of the northwest of 34-1s-3w. Simpson and Fell's No. 1 Gault, in the center of the southeast of the southwest of the northwest of 34-1s-3w. Westheimer Oil Co.'s No. 1 Snyder, in the center of the northeast of the southwest of the southwest of 34-1s-3w. Roxana Pet. Corp.'s No. 4 Caughman, in the northeast corner of 7-2s-3w; No. 1-B Higgins, in the center of the northwest of the southeast of the northwest of 16-2s-3w. Humble Oil & Ref. Corp.'s No. 1 Joy, in the center of the southeast of the southeast of the northwest of 35-5s-1w.

Comanche County—Cochran & Abernathy's No. 1 Roll, in the center of the northeast of the northwest of 32-4n-10w. Hall & Briscoe's No. 1 Dunn, in the northeast corner of the southwest of 25-3n-9w. Westheimer & Daube's No. 1 Indian, owd, in the center of the northeast of the northwest of the southeast of 30-2n-9w.

Cotton County — W. B. Lindsey's No. 1 Cooper, in the southeast corner of the northwest of 12-4s-10w.

Creek County — The Texas Co.'s No. 1 Weaver, in the southwest corner of the southeast of 13-19-8e. Roxana Pet. Corp.'s No. 1 Hendrickson, in the southeast corner of the northwest of 5-17-8e. Savoy Oil Co.'s No. 3 Johnson, in the center of the east line of the northwest of the southeast of 22-17-8e. Inter-Ocean and Rolland Oil Co.'s No. 2 Bigpond, in the southeast corner of the northeast of 27-17-8e; No. 3 Bigpond, in the northwest corner of the southeast of the northeast of 27-17-8e. Waite Phillips' No. 4 E. Alec, in the northeast corner of the northwest of the southeast of 27-17-8e; No. 5 E. Alec, in the northeast corner

of the southeast of 27-17-8e. Joemack Oil Co.'s No. 1 Bruner, in the southeast corner of the southwest of the northeast of 27-17-8e; No. 2 Bruner, in the northeast corner of the southwest of the northeast of 27-17-8e. Southwestern Pet. Co.'s No. 1 Bruner, in the southeast corner of the northwest of the northeast of 27-17-8e. Dick B. Mason's No. 2 Bright, in the center of the south line of the southwest of the northwest of 36-17-9e. Tidal Oil Co.'s No. 4 Dickson, in the southwest corner of the northeast of the northwest of 19-17-10e. S. J. Smith's No. 1 Fife, owd, in the northeast corner of the southwest of 3-17-11e. Terrell and others' No. 4 Hayes, in the southwest corner of the northwest of the southwest of 11-17-11e. M. Mead and other's No. 1-A Wilson, in the southwest corner of the northwest of the southwest of 16-17-11e. L. McClung and others' No. 1 Harris, in the center of the west line of the southwest of the northwest of 27-17-11e. Sheridan Oil Co.'s No. 1 Ricks, in the southwest corner of the northeast of the northeast of 30-16-11e. C. G. Tibbens' No. 26 Unallotted (twin), in the southwest corner of the northwest of the northeast of the southwest of 30-15-9e; No. 27 Unallotted, in the southwest corner of the northwest of the northwest of the southeast of 30-15-9e, (twin).

Garfield County—Sinclair Oil & Gas Co.'s No. 38 Walker (North), in the southeast corner of the northeast of the northeast of 13-22-4w; No. 39 Walker, in the southeast corner of the northeast (twin) of 13-22-4w. Hooper-Choppel's No. 1 School land, in the center of the southeast of the northeast of 16-22-3w. Roxana Pet. Corp.'s No. 1-H Schroeder, in the northwest corner of the southwest of 18-22-3w (twin). Sinclair's No. 29 Hartley, in the center of the northwest of the southwest of the northwest of 18-22-3w; No. 30 Hartley, in the southwest corner of the northwest of the northwest of 18-22-3w; No. 31 Hartley, in the southwest corner of the northwest of 18-22-3w (Win). Pender Petroleum Co.'s No. 2 Cain, in the northeast corner of the southeast of the southeast of 4-21-3w. Marland Oil Co.'s No. 1 Lohman, in the northeast corner of the southeast of 9-20-4w.

Grady County—Travis et al's No. 1 Baker, in the northwest corner of the southeast of the southeast of 15-9n-6w. Nichols Oil & Drilling Co.'s No. 2-A Reed, in the center of the southeast of the southwest of the northwest of 25-5n-8w. Briscoe and Hall's No. 1 Reeves, in the center of the southeast of the southwest of 34-5n-8w. Skelly Oil Co.'s No. 2 Duke, in the center of the north line of the southwest of the northwest of the southwest of 35-5n-8w. Magnolia Pet. Co.'s No. 1 Marge Pendley, in the center of the northwest of the southwest of 14-4n-8w; No. 1 J. M. Pendley, in the center of the southeast of the northwest of 14-4n-8w, owd. Sinclair Oil & Gas Co.'s No. 1 Dutton, in the southeast corner of the northwest of 5-3n-5w.

Hughes County—Tidal Osage Oil Co.'s No. 1 Harjo, owd, in the center of the northwest of the southeast of the southwest of 3-9n-11e.

Jefferson County—Pure Oil Co.'s No. 1 James, in the southwest corner of the southeast of 28-6s-5w. Simpson, Fell and Sigler's No. 1 Seay, in the northeast corner of the northwest of the northeast of 31-6s-5w. A. C. Brown's No. 3 Indian, in the northeast corner of the northwest of 33-6s-5w. Carter Oil Co.'s No. 4 Jones, in the center of the south line of the northwest of the northeast of 33-6s-5w. Gypsy Oil Co.'s No. 15 Seay (twin), in the northeast corner of the southwest of the northeast of 33-6s-5w; No. 16 Seay, in the center of the north line of the southwest of the northeast of 33-6s-5w; No. 17 Seay, in the northwest corner of the southwest of the northeast of 33-6s-5w, (twin). Woodruff et al's No. 1 Seay, in the northwest corner of the northeast of 5-7s-5w.

Kay County — Polling & Denny's No. 2-A Burkholder, in the center of the west line of the east half of the southeast of the northwest of 9-27-1w.

Lincoln County—Texas Pacific Coal & Oil Co.'s No. 1 Van Camp, in the southeast corner of the northeast of the southeast of 5-16-5e. Skelly Oil Co.'s No. 5 Ford, in the northeast corner of the southeast of the northeast of 7-15-6e. Mid-Continent Pet. Corp.'s No. 3 Earp, in the northwest corner of the southwest of the northwest of 8-15-6e; No. 4 Earp, in the northeast corner of the southwest of the northwest

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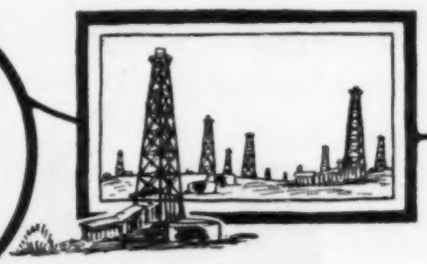

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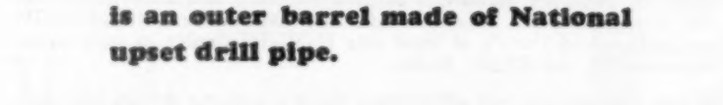

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of 8-15-6e. Magnolia Pet. Co.'s No. 5 Thompson, in the southeast corner of the northeast of the northeast of 4-14-5e.

Muskogee County—Rogers et al's No. 1-A G. W. McDaniels, in the northeast corner of the southeast of the southeast of 32-16-15e (twin). New England Oil and Pipe Line Co.'s No. 5 C. Smith, in the northwest corner of the southwest of 14-15-15e (twin). O. T. Gilbertson's No. 2 A. Cheney, in the southeast corner of the northwest of the northwest of 27-14-16e.

Okfuskee County—Windsor Oil Co.'s No. 1 Thomas, in the southwest corner of the northeast of the southeast of 16-12-11e. Riverland Oil Co.'s No. 1 Barnett, owd, in the southwest corner of the southeast of the southwest of 19-11-11e. Windsor Oil Co.'s No. 5 Grayson, in the center of the northwest of the southeast of the northwest of 22-11-11e; No. 5 Guy, in the southwest corner of 22-11-11e.

Okmulgee County—J. W. McCullough's No. 1 Stanley, in the northeast corner of the northwest of the southeast of 29-16-13e. Mid-Continent Pet. Corp.'s No. 6 Moore, in the center of the northeast of the southwest of 14-15-12e. Simms Oil Co.'s No. 14 Rentie, in the center of the north line of the southwest of the northwest of 31-12-12e. W. B. Pine's No. 8B Doyle, in the northeast corner of the northwest of the northwest of 18-15-13e; No. 1-A Rentie, in the northwest corner of the southwest of 3-15-14e. Transcontinental Oil Co.'s No. 1, in the northeast corner of the southeast of 4-15-14e. Hennessey et al's No. 3 J. Rowe, in the center of the south line of the northeast of the southwest of 8-15-14e. Sinclair Oil & Gas Co.'s No. 17 P. Jefferson, in the center of the northwest of the northeast of 23-15-14e. Elm Oil Co.'s No. 4 B. Fields, in the southeast corner of the northeast of the southeast of 13-14-14e (twin). J. L. Selby's No. 29 A. Anderson, in the center of the northwest of the northwest of 35-14-14e. Iron Mountain Oil Co.'s No. 15 H. Johnson, in the center of the west line of the east half of the northeast of the southwest of 24-13-14e. W. R. Sommerville's No. 4-A M. Scott, in the center of the southwest of the southwest of the northwest of 25-13-14e.

Osage County—Indian Territory Illuminating Oil Co.'s No. 5, in the northwest corner of 15-29-10e. Oliphant et al's No. 6, in the southeast corner of the northwest of the southeast of the northeast of 15-29-10e. Indian Territory Illuminating Oil Co.'s No. 1, in the southeast corner of 25-29-10e. Owen-Osage's No. 361, in the center of the east half of the northwest of 21-28-10e; No. 360, in the center of the north line of the northeast of the southeast of 26-28-11e. Phillips Pet. Co.'s No. 14, in the northeast corner of the northwest of the southeast of 2-27-5e. Earnest McCarty's No. 1, in the southeast corner of the northeast of 29-24-8e. Continental Oil Co.'s No. 4, in the center of the southeast of the northeast of the southeast of 29-24-8e. Sidwell et al's No. 16, in the southeast corner of the northeast of the northeast of 35-24-8e, owd. Tidal Osage Oil Co.'s No. 2, in the northeast corner of the northwest of the northeast of the southeast of 20-24-9e. Ross & Wetherill's No. 12, in the center of the north line of the northwest of the southeast of the southwest of 25-23-10e. Winemiller et al's No. 3, in the southwest corner of the northeast of the northwest of the southwest of 20-22-10e. Simons et al's No. 2, in the northeast of the southeast ofthe northeast of the northwest of 2-21-8e. Kanupp and Bozo Oil Co.'s No. 6, in the center of the south line of the north half of the south half of the northeast of 18-21-10e. Barnsdall Oil Co.'s No. 20, in the northwest corner of the northeast of 30-21-12e. Pioneer Pet. Co.'s No. 5, in the southwest corner of the southeast of the northwest of 5-20-11e. Winona Oil Co.'s No. 4, in the southeast corner of the northwest of the southeast of the northeast of 29-20-12e.

Pawnee County—Independent Oil & Gas Co.'s No. 1 Bryan, in the southwest corner of 1-21-6e. Magnolia Pet. Co.'s No. 1 Newell, in the northwest corner of the southwest of 2-20-6e. Westerly Oil Co.'s No. 5 Smith, in the southwest corner of the northwest of the southwest of 22-20-6e, owd.

Payne County—Magnolia Pet. Co.'s No. 1 Shannon, in the southeast corner of the northeast of the southeast of 14-19-4e; No. 1 Stover, in the northeast corner of the southeast of the northeast of 23-19-4e; No. 13 Chevelier, in the northwest corner of the southwest of the south-

east of 27-19-4e. The Empire Gas & Fuel Co.'s No. 1 Lester, in the northwest corner of the southwest of the northwest of 26-18-3e. Deep Rock Oil & Gas Co.'s No. 1 Ethridge, in the southeast corner of the northeast of the northeast of 27-18-3e; No. 2 Etheridge, in the northeast corner of 27-18-3e.

Pittsburg County—J. L. Pattison's No. 1 F. R. Smith, in the northeast corner of the southwest of the southeast of 32-9n-4e.

Seminole County—W. R. Ramsey's No. 1 Douglas, owd, in the center of the northwest of the southeast of the southeast of 30-8-8e. Homaokla Oil Co.'s No. 1 Davis, owd, in the southwest corner of the northeast of the northeast of 6-7-8e.

Stephens County — Carter Oil Co.'s No. 6 Garvin-Simms, in the northeast corner of the northwest of 2-2n-5w. Carter Oil Co.'s No. 2 J. A. Green, in the northeast corner of the northwest of the southeast of 2-2n-5w; No. 1 Hervey, in the northwest corner of the northeast of the southeast of 2-2n-5w. Danciger Oil Co.'s No. 1 Conner, in the northwest corner of the southwest of the northeast of 1-2n-4w. Red Seal Refining Co.'s No. 1 Joe Borobenski, owd, in the northwest corner of 5-1n-9w. Gant et al's No. 2 School, in the northwest corner of the northeast of 36-1s-9w. Carter Oil Co.'s No. 1 School, in the northeast corner of the northwest of 36-1s-9w. Malernee and Dunlop's No. 7 Brillian, in the northeast corner of the northwest of the southwest of 20-1s-8w. Merchant, Fain et al's No. 1 Harrison, in the northwest corner of 26-1s-8w. Magnolia Pet. Co.'s No. 2 Stephens, in the southeast corner of the southwest of the southeast of the northeast of 29-1s-8w. Empire Gas & Fuel Co.'s No. 4 Storey, in the southwest corner of the southeast of the southeast of the northwest of 32-1s-8w. Magnolia Pet. Co.'s No. 5 Glass, in the northeast corner of the northwest of the southeast of 33-1s-8w. Brannon et al's No. 4 Hanson, in the southwest corner of the northwest of the northwest of the northwest of 35-1s-8w. Skelly Oil Co.'s No. 28 Shelby, in the southeast corner of 26-1s-5w, twin. Magnolia Pet. Co.'s No. 18 Ziegler, in the center of the southwest of the southeast of the southwest of 34-1s-5w, twin; No. 2 Fobb, in the northeast corner of the southwest of the southwest of 12-2s-8w. Commercial Pet. Co.'s No. 10-A Fobb, in the northeast corner of the northwest of the southeast of the southwest of 12-2s-8w. Gant et al's No. 1 Armstrong, owd, in the center of the northeast of the northeast of the northwest of 8-2s-6w. Continental Oil Co.'s No. 1 Davis, in the southeast corner of the northeast of the northeast of 11-3s-9w.

Tulsa County—Crown Central Pet. Co.'s No. 1 Beaver, in the northeast corner of the northwest of the northeast of 15-19-10e. Sand Springs Home's No. 3 C. Page, in the southwest corner of the southeast of the northeast of the northwest of 3-19-11e. Frates' No. 3 Berryhill, in the center of the north line of the south half of the northeast of the southwest of 1-17-14e. Minshall et al's No. 2 Childers, in the northeast corner of the southeast of the southwest of 2-17-14e. W. Brennan et al's No. 1-A Williams (twin), in the northeast corner of the southwest of 16-16-14e.

Wagoner County—R. H. Perry's No. 1 C. Burgess, in the center of the northwest of the southwest of 35-18-16e. O. A. Sewell et al's No. 2 Tom Taylor, in the northeast corner of the southeast of the northeast of 20-17-16e.

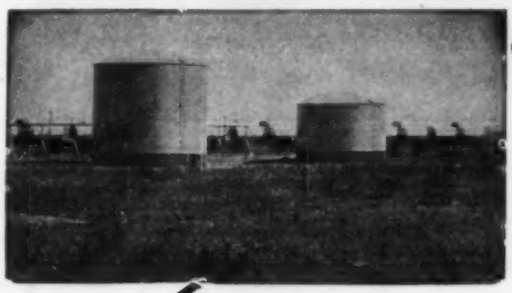
KANSAS

Barber County—Skelly Oil Co.'s et al's No. 1 Richardson, in the southwest corner of 30-30-14w.

Butler County—Empire Gas & Fuel Co.'s No. 85 Hegberg, in the center of the south line of the southwest of the northeast of the northwest of 28-25-5e. Tidal Oil Co.'s and Great Southern Oil Co.'s No. 33 Dickinson, in the northeast corner of the southwest of the southwest of 16-26-8e. Empire Gas & Fuel Co.'s No. 9 Starkey, in the northwest corner of the southeast of the southeast of 35-27-4e. Lewis Oil Co.'s No. 2 Laughton, in the northeast corner of the southeast of the northwest of the northeast of 33-27-7e.

Chase County—Denton et al's No. 1 Ray, in the southwest corner of 5-21-9e.

Greenwood County—Davis, Hazlett et al's No. 13 DeMalorie, in the southeast corner of the southwest of the northeast of 12-22-10e. Titus et al's No. 9 Prather, in the southwest



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corner of the northeast of the southwest of the northwest of 29-22-10e. Empire Gas & Fuel Co.'s No. 4 Duby, in the northwest corner of the northeast of the southwest of 14-22-11e; No. 9 Fromme, in the southwest corner of the northwest of the northeast of 14-22-11e. Simmons & Pulaski Oil Co.'s No. 1 Frankhauser, in the northeast corner of the southwest of 4-22-12e. Shaffer & Howell's No. 1 Norton, in the southeast corner of the southwest of 14-22-12e.

Kingman County—T. B. Slick's No. 1 Herman, in the northwest corner of the southwest of 15-27-7w. Cassoday Oil Co.'s No. 1 Yoeman, in the center of the southeast of 35-28-7w.

Lyon County—Reed et al's No. 1 Carr, in the northeast corner of the northwest of 33-17-11e. Parkening et al's No. 1 Welch, in the southwest corner of the northeast of 18-21-12e.

Phillips County — Phillips Pet. Co.'s and Prairie Oil & Gas Co.'s No. 1 McKinley, in the center of the south half of the southeast of 13-5s-18w.

Wabaunsee County—White Drilling Co.'s No. 1 Young, in the southwest corner of the northeast of 29-14-11e.

LOUISIANA

Acadia Parish—Etropal Oil Co.'s T. Reagan 4, 8-10s-1w, 475 ft S and 20 ft E of NW corner of SE¼ of NW¼. Jennings Pet. Co.'s Heywood 2, 41-9s-2w, 450 ft S and 550 ft W of NE.

Caddo Parish— H. P. Burford's Dambly 1, 2-20n-16w, 900 ft S and 160 ft E of NW corner of NE¼. Dixie Oil Co., Inc.'s Donovan 5, 21-22n-15w, 945 ft E and 35 ft N of center of section; Dillon 73, 11-21n-15w, 610 ft W and 415 ft N of SE corner of section. Double 11 Oil Co.'s Wadkins-Lane 5, 27-21n-15w, 450 ft E and 200 ft S of NW corner of NE¼ of NE¼. Mrs. N. M. Hancock's Hampton 2, 15-21n-15w, 1163 ft S and 525 ft W of NE corner of section. The Texas Co.'s Levee Board 60, 33-21n-16w, 1720 ft S and 870 ft W of NE corner of section.

Calcasieu Parish—The Union Sulphur Co.'s Fee 718, 29-9s-10w, 1021 ft E and 521 ft N of center of section.

Jefferson Davis Parish—Yount-Lee Oil Co.'s Ervins-Bishop 11, 28-9s-5w, 553 ft W and 192 ft S of NE corner of section.

La Fourche Parish—E. F. Simms' Price 1, 13-15s-16e, 504.2 ft E and 584.8 ft N of SW corner of section.

La Salle Parish—O. W. Clark's Bass 1, 25-10n-1e, 625 ft S and 150 ft W of NE corner NW¼ of NW¼; Gaharan 1, 26-10n-1e, 560 ft S and 30 ft E of NW corner of SE¼ of NE¼; J. D. Russell 1, 26-10n-1e, 20 ft S and 550 ft W of NE corner of NE¼ of SE¼; W. T. Russell A-2, 26-10n-1e, 150 ft N and 150 ft W of SE corner of NE¼ of SE¼. Kimbrough & Willis' Fee 1, 26-10n-1e, 393 ft W and 328 ft S of NE corner of NE¼ of SE¼. Huey P. Long Jr.'s C. C. Bass 1, 25-10n-1e, 36 ft N and 324 ft E of SW corner of SW¼ of NW¼. Louisiana Oil Ref. Corp.'s Tremont Lbr. Co. B-30, 25-10n-1e, 250 ft E and 150 ft N of SW corner of SE¼ of NW¼. Natural Gas & Fuel Corp.'s Hardy Tullos 2, 26-10n-1e, 630 ft S and 150 ft W of NE corner of SW¼ of NE¼. Ohio Oil Co.'s Urania Lbr. Co. 4, 18-10n-2e, 88 ft S and 89 ft W of NE corner of NW¼ of NE¼. Standard Drilling Co.'s Clinton 1, 26-10n-1e, 230 ft N and 270 ft W of SE corner of SE¼ of NE¼; Clinton 2, 26-10n-1e, 125 ft N and 165 ft W of SE corner of SE¼ of NE¼. Standard Oil Co. of La.'s Urania Lbr. Co. 5, 13-10n-1e, 167 ft W and 165 S of NE corner of NE¼ of SE¼; Urania Lbr. Co. 6, 13-10n-1e, 330 ft N and 330 ft W of SE corner of NE¼ of SE¼; Urania Lbr. Co. 7, 13-10n-1e, 200 ft S and 200 ft E of NW corner of NE¼ of SE¼; Urania Lbr. Co. 8, 13-10n-1e, 200 ft N and 200 ft E of SW corner of NE¼ of SE¼. H. H. Sherman's Russell 1, 25-10n-1e, 2160 ft N and 810 ft E of SW corner of SE¼; Russell 2, 25-10n-1e, 2150 ft N and 1170 ft E of SW corner of SE¼. Geo. W. Wetherbee's A. S. Norrid 1, 25-10n-1e, 560 ft N and 356 ft W of SE corner NW¼ of NW¼. J. H. Williams Drilling Co.'s Hebert 1, 26-10n-1e, 200 ft W and 75 ft S of NE corner of SE¼ of NE¼. Geo. W. Zeigin's Urania Lbr. Co. 3, 18-10n-2e, 2135 ft N and 2367 ft E of SW corner of section.

Winn Parish—Standard Oil Co. of La.'s E. E. Albritton 1, 27-10n-1e, 200 ft N and 200 ft W of SE corner of NE¼ of SE¼.

LETTERS OF Paul Peebles P.S.G.

mi deer cleopatry

well cleo hunny yu no that I hav bin tellin yu that I was a kinder of a mine 2 giv up puttin so mutch of mi time & tallents 2 the geeology bizness, but it looks like now that mi perfession is goin 2 need me a hole lot moar than I hav bin thinkin it did. yu sea hunny it is a hole lot of the boys what aint saw the same lites that me & tom o'Donnell has saw & still keeps pikin at the bizness, so sinct I am kinder morrerly responstsible for a lot of them takin up this work on account of me bein kinder of a leader in the perfession for so menny yeres, forinstants like I led them up 2 shreesport. so now they are figgerin on havin a compleat liberary for the assosiashun & of corse they will hav 2 hav sumboddy 2 keep track of the library, & so it has ockurred 2 me that it is mi duty under the circumstantses 2 sakrifise miself 2 there service & be the keeper of the librery for them & also the secretary on account of that way it ort 2 be a pretty good job. the onliest trouble is that mabe they will want me 2 keep the librery sumwheres elst escept in huston whitch wood make me kinder hesertate 2 do it on account of huston is a good town & after a feller has lived hear & gotten uster citty ways it is 2 quiet for him 2 liv in a place like dalles or tulsey or cow town. but if the call is insistent enuff like the pollytishuns says, well I will consider the claims of mi feller geeologists parrymount 2 mi persenal likes & dislikes in the premerses & ascept there offer if it is good enuff.

Yu sea hunny this hear liberary will not be no ordernery liberary like they hav got in goose creek, but will be a reglar geeology librery with nuthin but books about geeology in it. well they are ded set on it bein a compleat liberary, whitch wood mean that it wood hav in it all that is noed about geeology. & that wood mean that they wood hav 2 hav me their because I aint never rit down what I no about geeology. so havin me their handy like wood mean that they wood hav on tap all that is rit in books about geeology & all elst besides, because I know what aint in the books.

so yu sea hunny sinct the boys wants all the infermation about geeology colleckted in 1 place, well it is kinder up 2 me 2 help them out, don't yu think so? it will be kinder hard on me 2 hav 2 move away from this close 2 yu, but if they insist, well I guess I cant help it. but hunny yu do not need 2 werry because I will not let them put no girls in the liberary 2 help me.

All this liberary bizness & where the hedquarters of the geeologists assosiashun will be is goin 2 be desided at the next meeting whitch is in dallis this month, so of corse I am goin 2 hav 2 go 2 the meetin 2 sea how it comes out & also 2 let the boys no that I will sackerfise mi brite future 2 be of servise 2 them. yu sea the assosashun has not had no reglar hedquarters on account of they did not hav enuff munny in the tresry 2 hav 1, but sinct so menny innersent yung fellers has bin gittin out of the skools & joinin the assosiashun, well they hav got enuff in now that they hav got the munny 2 hav a permernent hedquarters with a reglar office & all that & besides fix up this hear liberary whitch I was tellin yu about. what they meen about a permanent hedquarters is that they will begin payin rent & permernent is jest a relertive term whitch applies as long as they pay the rent reglar.

I seen in the paper the other day where that feller whitehed up in dallis whitch was the 1 whitch was zeke in that show where russel loyd maid so mutch fun out of yu down hear in huston that time when they had the geeology meetin hear, well he is fixin up the program for the dallis meetin & they are goin 2 hav anuther 1 of them yell for the skool yu cum from meetins like they got me put in jale about up 2 shreesport that time. so I cood not yell for the nite skool whilst all the rest of them was yellin for kansas & texas & all the rest of the big skools. but this time is perticklur sed in the announcements that the luminerys of them skools and others will hav a chanct 2 put on a stunt in a cirkus at the banket whitch will be in the place of enny speaches. well sinct they will not let me make no speach at the banket well they will hav 2 let me hav 1 ring in there cirkus, & bleev me hunny what old nite skool lacks in numbers she will make up in noise. so far as I no I will be the onlies lumernery of nite skool at the meetin but I will shine briter than a tortch I seen hear in huston sundy.

& speakin about that tortch remines me that yu do not need 2 pay no atenshun 2 nuthin yu here about me bein drivin out towards the edges of town after dark with a laddy because what I was goin out there for was 2 sea the tortch whitch they hav lit 2 show the peeple that nateral gas will bern. this hear laddy was the 1 whitch wanted me 2 go out there because I hav saw natral gas bernin befoar Now & noed that it will bern & besides I hav saw it bernin in tortches in the oil feelds. so that is the reesen I was out there, & I am tellin yu in the case that onnery slim was around & seen me & beat it rite back down there 2 tell yu like he is all the time tellin yu lies on me. but what intrests me about this here tortch whitch I am tellin yu about is that if they was bernin it like that at the well, well the commishun wood be tarin its hare & hollerin about wastin gas & all that, but after yu hav put it in a pipe line & carred it a cupple hundred miles, well then gas aint no moar a natral resourses but is then a public utility & yu can do ennything yu want 2 with it. like yu hav proberly noticed or I hav sed 2 yu befoar, it shore is a funny werld.

well hunny I hav got cleen offen the subjeck of the meetin, but I gess yu understand that I am goin 2 it, & when I go 2 dallis it will not be on account of that woman up there whitch ritten 2 me onct.

yore lovin paul.

ps. if I hav charge of that library I will put a coppy of the werld almernack in it in the case ennyboddy wants 2 read what the constertootshun has 2 say about the conservashun of oil.

fishing

Tool Specialists

If you are having trouble fishing 1 9/16" and 1 5/8" diameter sucker rod couplings in 2" tubing—investigate the new LEONARD GIANT BOX SOCKET.

This tool operates by *SLIP GRAB* that eliminates any necessity for jar down, screw on or friction holds in trying to get the FISH.

It's just another of our tools that quickly pays its way by SPEEDING UP FISHING and getting the well back on the pump.

Better send for Bulletins

Leonard AJAX Giant Box Sucker Rod Sockets

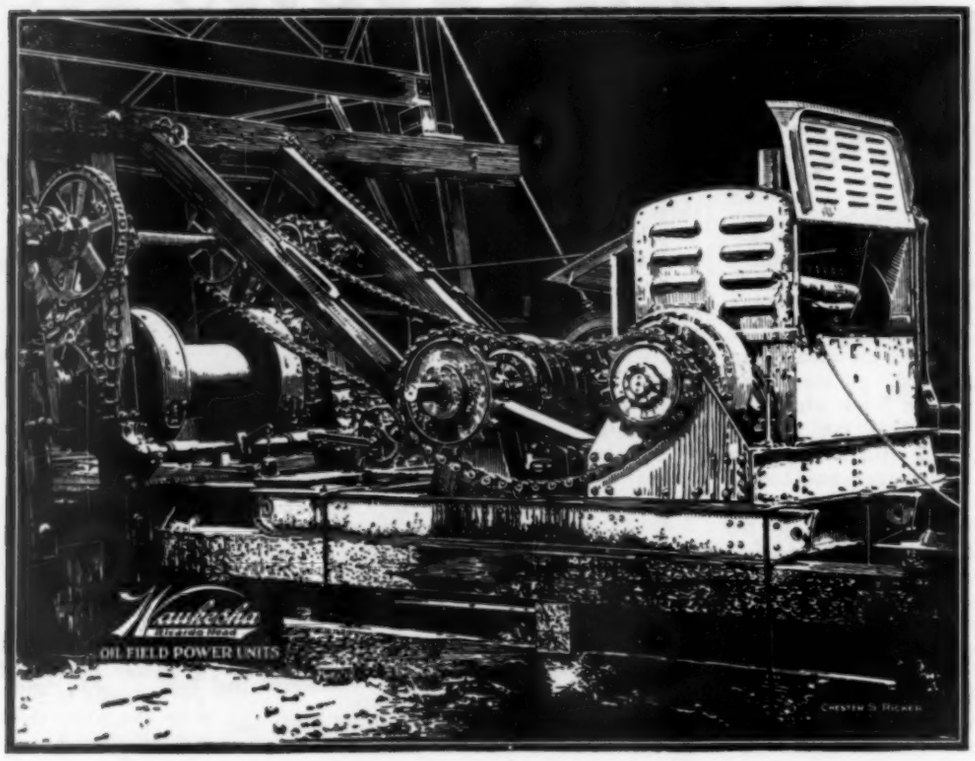
Distributed By ALL SUPPLY STORES

Baird Tool Works

MANUFACTURERS

Tulsa, Oklahoma, U.S.A.

Waukesha-Driven Portable Rotary Rig near San Antonio, Tex.



IDEAL ROTARY POWER

Power, reliability and portability are essential rotary rig engine requirements. These qualities and the ability to run on easily obtained fuel or "waste gas" and consume almost no water have made these "red orange" Waukesha "Ricardo Head" Units the standard of comparison in the oil fields.

Waukesha builds "Ricardo Head" oil field power units ranging from 15 up to the 100 H. P. Unit illustrated here. An "Oil Field Bulletin" describing them will be mailed gladly on receipt of your request.

WAUKESHA MOTOR COMPANY

Waukesha Wisconsin

New York	Kansas City	Denver	Tulsa	Houston	Long Beach, Calif.
Aeolian Building	*V. L. Phillips Co.*	*Wilson Machy. Co.*	*C. F. Camp Co.*	*Portable Rotary Rig Co.*	*Star Drilling Machine Co.*

Exclusive Builders of Heavy Duty Gasoline Engines for Nearly Twenty Years

NEW EQUIPMENT, CATALOGS, BULLETINS, BOOKS

Halliburton Drilling Machine Proving Value

"You just set it and let it run. If the driller wants to, he can hunt a shade and take a nap. The outfit will go along just as well." This is the way a distributor for Halliburton's Automatic Drilling Machine answered the question, "How does it work?"

To the driller such a machine will probably seem impossible. The inventor, Erle P. Halliburton, admits it had perplexities for him as he developed it, yet he announces that the machine will positively do the work claimed for it without the attention of any one after it has been set.

The manipulation of the total weight of the drill stem to maintain such a division of this weight between the draw-works and the bit as will secure the greatest efficiency in the whole apparatus is what might be called The Art of Drilling.

The proper apportionment is that which fixes such a load upon the bit that the greatest torque which can be safely transmitted to the bit is continuously and evenly employed in making hole. Too much weight by increasing the required driving torque either slows the engine, makes bad hole, or puts hazardous strains upon the mechanism. Too little weight, with the employment of low and inefficient torques, sets up tension strains in the drill stem, and due to excessive vibrations is apt to twist it off, besides at all times failing to utilize the full possibilities of the entire apparatus for making hole.

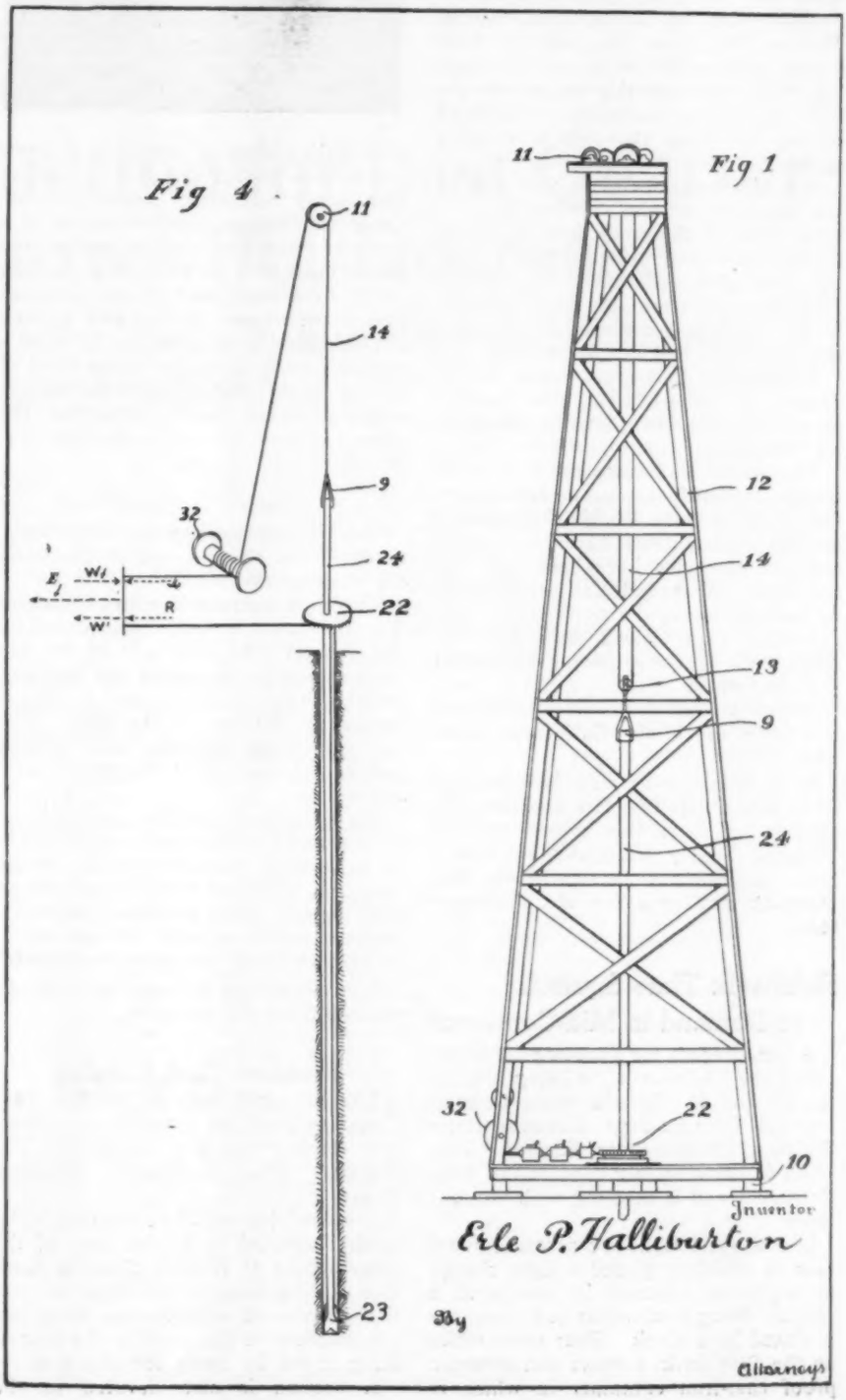
Mr. Halliburton's device has for its purpose the preservation of a uniform and constant torque load on the drill stem and bit by varying the lifting tendency of the draw-works and the avoiding of excessive or deficient rates of feed, thus obtaining the greatest amount of work with the minimum of hazard.

A differential is used to obtain this end. The differential is placed directly in line with and connected to the main power shaft so that all of the energy from the single prime mover must be transmitted through it. The function of the differential is that of properly apportioning the power between the work of rotating the drill stem and the work of raising the drill stem. It is controlled in performing this task by the action and reaction of the various forces it induces and which are applied to it.

The apparatus normally limits the amount of force which may be imposed upon the rotating mechanism, and under any circumstances this force at its maximum can never be more than one-half the force exerted by the prime mover.

The uniform torque necessary to overcome the resistance to operation can be fixed and maintained by the choice of the percentage of the weight of the drill stem supported through the draw works by the differential. This torque, once determined, can be maintained substantially constant regardless of the variations in resistance encountered by the bit or by varying velocities of the prime mover.

Mr. Halliburton relies for this feed



control entirely upon the interplay of the forces tending to rotate the drill stem and the forces tending to raise or lower its "center of gravity."

The outfit also employs the static position of the mass of the drill stem as a reservoir of energy to and from which energy may be automatically diverted as required to compensate for fluctuations in the resistance to rotation of the drill stem, and to maintain a substantially constant driving torque.

The outfit is constructed in a single unit mounted on its own frame. No difficulties are encountered in installing it since it sets between the engine and the line shaft, on the engine sills. Standard chains connect it to the line shaft and the rotary table sprockets.

Tests made on the outfit by the St. Helens Petroleum Company, of California, with a Bristol pressure recording chart, showed the torque on the drill stem to be practically constant all during the time the test was being made.

Mr. Halliburton claims that due to the flexibility of the differential automatic control, the strain from vibration on the entire rig, plus the drill pipe is cut down very materially. Big savings in drilling costs are also made possible by the machine because of fewer round trips going in and out of the hole.

Elimination, to a great extent, of the danger of twist-offs is also another signal advantage of the automatic drilling machine.

The outfit was introduced in California and has been in process of perfecting since 1924. Within the past few months various tests have been made, and the machines have been put into operation on several California wells. In each instance, the performance has exceeded expectations according to statements of those people connected with the work.

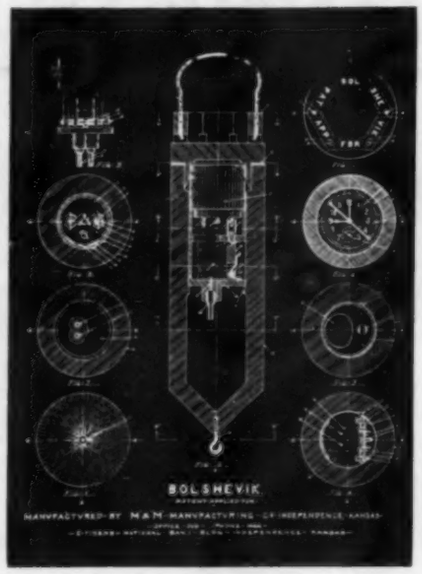
Within a short time several machines will be in use in the Gulf Coast territory.

More information can be obtained from Erle P. Halliburton, Duncan, Oklahoma, or from any branch of The National Supply Company, in Texas, National Supply Company having distributing privileges for Mr. Halliburton.

Bolshevik Time Squib is In Demand in Mid-Continent

A timed squib for shooting oil wells, called the "Bolshevik," is being sold by the M. and M. Manufacturing Company, 528 Citizens-First National Bank Building, Independence, Kansas. This squib is being widely used in the Mid-Continent and is meeting with unusual favor.

It is a water tight and pressure proof case in which is placed a light charge of explosive, actuated by means of a reliable firing mechanism and accurately timed by a clock. Four parts make up the Bolshevik; a water and pressure proof cast-iron container in which is



placed the charge of explosive; a screw cap with a gasket attached; a removable brass firing-cage containing the firing mechanism which consists of a hammer attached to a mouse-trap spring and held in the firing position safely by a mild steel releasing-screw; and a means for timing and turning the releasing screw, in the form of a specially built clock, the alarm wind of which fitting the slotted head of the releasing-screw, easily unscrews the same and fires the shot at the time predetermined by the shooter.

The Bolshevik is used in territory where, by reason of caving wells and various difficulties, electric wire, bumper shots and other means of exploding the shot are employed.

The shot is run in the usual manner. The Bolshevik is loaded and timed by the shooter who lowers it to the top of the shot by means of the bail, unhooking his line from it and leaving it resting in the top of the shell. The casing may then be pulled and the shot will be exploded when the proper time arrives.

Each Bolshevik weighs approximately 28 pounds, is three and one-half inches in outside diameter and 21 inches long. It is tested before shipment to 2000 pounds water pressure, externally applied, and is suitable for any depth of hole and fluid pressure encountered.

More complete information may be secured from the company.

Hughes Tool Catalog

The complete story of Hughes Tool Company products is told in an attractive catalog recently issued by The Hughes Tool Company, Houston, Texas.

A special feature of the catalog is the section devoted to illustrations of the manufacture of Hughes Simplex Rock Bits. These illustrations show the entire process of manufacture from the manufacture of the steel to the assembling of the bit ready for shipment.

A section is also devoted to the Hughes Weight Indicator. This is a comparatively new product, and one that has found a big demand in the fields where it has been introduced. Complete information on the manufacture and use of the indicator is given.

"Acme" tool joints are featured and cross section cuts show the "Acme" thread in detail.

Hughes disc bits, milling and fishing tools are also described in the catalog.

Copies may be secured upon application to The Hughes Tool Company, Houston, Texas.

Safety Device Makes Spear Turn Loose When Desired

Practical design of the California Rotary Spear is rapidly gaining prestige for this device in the various fields throughout the country, according to the manufacturers, the H. C. Smith Manufacturing Company, Whittier, California.

The California Rotary Spear has an exclusive patented safety feature which is said to positively insure loosening its hold, permitting the spear to be brought for another trial if it is impossible to make recovery the first time.

This spear takes hold like any other spear, but the safety device makes it possible to back the string a half turn, breaking the hold so the spear can be pulled out.

This spear also permits circulation when going down inside the pipe, all the way through, and will circulate loose if desired.

Complete descriptive information will be sent by the company to interested parties, upon request.

Buck & Stoddard Cathead Will Not Groove From Lines

One of the greatest menaces to men working in the derrick is the use of catheads after grooves or ridges have been worn in them, with the attendant accidents resulting from snapping or breaking lines.

In attempting to eliminate this hazard, Buck and Stoddard, 3354 East Slauson Avenue, Box 720 Arcade Station, Los Angeles, California, have put on the market a cathead manufactured from Amsco Manganese Steel. This cathead, it is said, will not groove under the action of the rope.

The machine ground surface of this cathead acquires high polish from action of the tong line, prolonging the life of the rope and allowing it to travel across the cathead smoothly, according to the manufacturers, thereby eliminating the danger of overlapping and greatly minimizing breaking and snapping lines.

Additional advantageous features of the Amsco Manganese Steel Cathead will be given by the company on request.

TEN LEADING TEXAS COMPANIES

Company—	Fourth Quarter 1925	Third Quarter 1925	Second Quarter 1925	First Quarter 1925	Fourth Quarter 1924
Humble Oil and Refining Co.	3,513,294	3,830,444	4,533,395	4,968,388	3,428,657
Gulf Production Company	3,307,880	3,656,318	3,378,142	2,722,252	2,538,216
The Texas Company	2,430,441	2,760,166	3,184,793	2,590,554	2,237,132
Big Lake Oil Oil Company	1,723,221	1,166,302	1,202,442	.....	.....
Pure Oil Company	1,593,636	1,967,839	2,567,842	1,894,604	1,856,850
Magnolia Petroleum Company	1,476,523	1,617,239	1,527,253	1,584,990	1,418,382
United North and South Oil Company	1,451,897	1,473,465	1,603,716	1,798,609	2,188,246
Group No. 1 Oil Company	1,295,841	1,190,857	905,807	.....	.....
Republic Production Co.	601,221	673,343	.....	.....	.....
Sun Oil Company	438,410	597,821	725,113	618,643	794,944

Total, fourth quarter, 1925	31,443,244
Total, third quarter, 1925	34,164,140
Total, second quarter, 1925	34,328,549
Total, first quarter, 1925	38,129,092
Total, fourth quarter, 1924	31,194,183

Texas Production for Last Quarter 1925 Shows Big Decrease

Report to state auditor shows total of 31,443,244 barrels valued at $55,602,103.

TEXAS production for the last quarter of 1925 took a sharp turn downward, resulting in a decrease of 2,720,896 barrels as compared with the previous three months. Figures taken from the state auditor's office give the total amount of crude as 31,443,244 barrels. Approximate value of this oil as estimated for taxation purposes was $55,602,103.00.

Humble, Gulf, and The Texas Company all showed decreases for the quarter, but these companies kept their respective places in the list of the ten leading concerns, Humble first, Gulf second, and The Texas Company third. A check on back figures shows these companies to have kept this order throughout 1925. Humble showed the smallest loss with a difference of 317,150 barrels between the third and fourth quarters. The Gulf Production Company lost 348,438 barrels, and The Texas Company's output was down 329,725 barrels.

Big Lake Oil Company, the major producer in the Reagan County field, boosted its yield more than a half million barrels and jumped from eighth place in the list during the third quarter, to fourth during the last three months of the year. Group No. 1, the other big producer in Reagan County, gained a slight amount, but not enough to cause it to move up in the list.

Pure Oil Company, principal operator in the Mexia district, lost 374,203 barrels and dropped from fourth to fifth place, crowding Magnolia down one place also.

United North and South Oil Company, owner of the Luling field, also dropped one place, but showed a loss of only 21,568 barrels of production as compared with the third quarter.

Republic Production Company and the Sun Oil Company each lost in output, but kept their respective places at the bottom of the list.

Name— Address	Barrels	Gross Value
Aaronson, M. L., Tulsa, Okla.	267	579
A. B. C. Oil Co., Electra	136	2,857
Abercrombie, J. S., Houston	34,618	51,927
Acorn Oil Co., Beaumont	6,840	10,260
Ada Belle Oil Co., Batson	17,554	26,331
Adams Brown & Lickey, Wichita Falls	3,147	6,481
Adley, E. A., Houston	180	225
Agate, A. L., Trustee, Eastland	381	718
Ailes, J. W., Wichita Falls	1,330	2,674
All American Oil & Gas Co., Oklahoma City, Okla.	70	135
Alonzo Jr., Oil Producers, Laredo	4,776	4,839
Albany Oil Co., Breckenridge	2,475	4,578
American Texas Oil Co., Somerset	427	560
Amicable Life Ins. Co., Waco	488	732
American Refining Co., Wichita Falls	129,080	177,718
Amster, N. L., Ardmore, Okla.	5,066	7,180
Amarillo Oil Co., Amarillo	1,945	2,432
Andrews Petroleum Corp., New York City, N. Y.	5,875	6,499
Andrews, W. R. et al, Breckenridge	13,339	22,789
Appleman & Gutman, Tulsa, Okla.	1,749	3,506
Apple Brandeberry Oil Co., Wichita Falls	29,020	66,844
Appleman, H., Tulsa, Okla.	11	19
Arkansas Natural Gas Co., Pittsburgh, Pa.	146	285
Arkansas Fuel Oil Co., Pittsburgh, Pa.	5,291	9,462
Arkmo Oil Co., Somerset	2,232	2,901
Arnold & Frazier, Putnam	366	788

Name— Address	Barrels	Gross Value
Arlington Oil & Gas Co., Arlington	176	184
Artex Oil Co., Wichita Falls	6,268	12,824
Associated Petroleum Co., Ft. Worth	12,981	20,126
Associated Petroleum Co., Ft. Worth	7,548	12,114
Ascot Co., Wichita Falls	16,510	33,468
Associated Oil Company, San Francisco, Calif.	74,866	97,886
Ashe Syndicate, Ft. Worth	1,479	2,8[illegible]
Atlantic Oil Production Co., Dallas	246,619	457,512
Atlantic Oil Royalty Corp., New York, N. Y.	1,207	1,412
Aztec Petroleum Co., San Antonio	402	407
Barkley & Crotty, Ranger	12,598	23,321
Barkley, Crotty, Six & Little, Ranger	8,692	17,585
Bush & Clark, Waco	481	972
Big Indian Oil & Dev. Co., Gainesville	972	1,944
Brinkley Producing & Ref. Co., Pittsburgh, Pa.	818	1,361
Baker Oil Co., Inc., Houston	4,948	7,422
Baldwin, F. C., et al, Ft. Worth	7,916	17,538
Barkley & Meadows, Corsicana	86,416	175,772
Barlett, Wm. & Co., Electra	705	1,554
Basham, C. E. Wichita Falls	34	89
Bay Oil & Gas Co., Mirando City	2,862	3,014
Bashara & Bashara, Waco	160	240
Bashara, M. J., Wichita Falls	7,616	12,287
Bashara, J. F., Houston	37,081	55,405
Bartlett Production Co., Thorndale	6,117	12,664

FROM THE DUTCH EAST INDIES COMES THIS MESSAGE:

Pangkalah, Brandan, Sumatra, D. E. I.
10th November, 1925

The Oil Weekly,
Houston, Texas.
Dear Mr. Dudley:

I had the pleasure of receiving your letter and some copies of your weekly. Enclosed I send you a list of a few of my oil friends interested in your publication.

I was searching a long time for a weekly that could give me particulars of the modern production methods now in use in your fields and to follow the more scientific direction that is coming also in this part of the industry.

In the drilling and production methods the European oil periodicals are very short. Other European oil journals and also some American journals are giving too much "detail" about drilling and production records of the different fields, not interesting for one who is not closely related to these fields.

With kind regards, I remain,

Very truly yours,

A. VAN OVERSTRATEN KRUYSSE,
Petroleum Engineer and Geologist.

You too, will like The OIL WEEKLY.

Have it sent to your home a whole year for ONLY $1.00. Use the attached order blank. Thanks.

THE OIL WEEKLY

P. O. BOX 1307 Houston, Texas

Enter my name for one year's subscription to The OIL WEEKLY, for which you will find enclosed check for $1, as payment in full.

Name.....

Street and No.....

City and State.....

I am with The.....Company

and my position is.....

(BE SURE TO CHECK CLASSIFICATION, otherwise we will have to hold up entering your subscription until we get information from you.)

Name— Address	Barrels	Gross Value
Bass & Dillard, Wichita Falls	3,451	7,144
Baker, Mollie B. & J. A., Breckenridge	6,254	11,568
Barkley & Meadows, Wichita Falls	178,232	367,592
Beggs Oil & Gas Co., McKinney	2,092	4,505
Benkendorfer, J. P., San Antonio	571	1,132
Bennett, Mills, Houston	25,673	34,700
Bell Burke Oil Co., Waco	546	1,039
Bexata Oil Co., San Antonio	2,597	3,981
Bernstein, Eli D., Oklahoma City, Okla.	307	553
Bearden, Annie, Wichita Falls	6,887	13,965
Belcher, R. T., Wichita Falls	204	399
Big Lake Oil Co., Pittsburgh, Pa.	1,723,221	3,321,054
Big State Oil Corp., Dallas	2,463	2,463
Big Four Consolidated Oil Co., El Paso	535	936
Big Bend Oil & Gas Co., Laredo	9,907	11,375
Biel, Wm., Von Ormy	40	65
Black Cat Oil Co., Electra	2,232	4,354
Bleakley & Kinnison, Wichita Falls	1,202	2,168
Bliss & Weatherby, Shreveport, La.	6,418	13,986
Bluebonnett Pet. Corp., San Antonio	1,841	2,725
Bluebonnet Oil Co., Wichita Falls	870	1,785
Bluebird Oil Co. (L. G. Marshell), Houston	13,429	26,786
Blair & Kell, Dallas	11,467	23,910
Bleakley & Carr, Houston	2,953	4,429
Bobo, W. T., Trustee, Battle Creek, Mich.	72	106
Bonchel & Co., Wichita Falls	16,967	34,561
Borealis Oil Co., Oklahoma City, Okla.	6,955	13,980
Boller, C. W., Wichita Falls	2,110	4,428
Boyd, E. W., Cisco	1,793	3,814
Bowman Oil Co., Rockdale	3,818	7,798
Bolding, W. P., Wichita Falls	721	1,450
Bonner, J. H. S., et al, Wichita Falls	4,819	10,738
Brown, Mrs. Carrie L., et al, Orange	20,930	31,395
Bright, Samuel, Wichita Falls	1,604	3,359
Brothers Oil Co., Inc., Tulsa, Okla.	16,345	37,165
Brown, Dr. E. W., Estate, Orange	7,847	11,771
Brownwood Producing & Ref. Co., Brownwood	3,295	6,444
Brinkley Producing & Ref. Co., Pittsburgh, Pa.	2,428	4,710
Brown & Co., Inc., Cisco	6,210	13,605
Bruce, H. J., Wichita Falls	1,947	3,993
Brown, Geo. I., Estate, Red Bank, New Jersey	1,752	2,716
Bridwell & Heydrick, Trustees, Wichita Falls	8,386	17,484
Brady Bros., Ardmore, Okla.	209	445
Breckenridge Gasoline Co., Toledo, Ohio	269	477
Broughton, S. J., Brownwood	100	100
Bradley, E. L., Moran	119	241
Braden Co., (The), Eastland	4,715	9,136
Brady, J. F., Ardmore, Okla.	642	1,296
British American Oil Prod. Co., Tulsa, Okla.	26,068	54,155
Brock & Showers, Corsicana	16,917	36,833
Brady, H. A., Ardmore, Okla.	188	438
Brannon & Murray, Eastland	26,370	57,658
Bridwell & Heydrick, Wichita Falls	101,391	213,452
Bridwell & Mayfield, Wichita Falls	20,125	43,473
Brothers, Gallagher & Lawson, Desdemona	14,281	29,666
Bullington, Lee, Pendleton & Hamon, Wichita Falls	5,699	12,128
Bullington, Lee & Pendleton, Wichita Falls	18,965	39,109
Buckeye Pipe & Supply Co., Breckenridge	1,017	1,850
Buckeye Development Co., Columbus, Ohio	365	668
Burr, J. K., San Antonio	389	682
Burk Burnett Jr., Oil Co., Ft. Worth	591	978
Buchanan, S. R., Batson	12,490	18,735
Burk Venus Oil Co., Dallas	102	189
Burley Oil Co., Humble	4,144	6,713
Burns & Maxson, Wichita Falls	17,405	36,329
Burton, McKee Oil Co., Strawn	858	1,676
Burleson & Chenault, Wichita Falls	618	1,134
Bush & Cluck, Waco	608	881
Bynumm, W. W., Minerva	1,911	3,910
Christie & Stoops, Ranger	458	817
Cassoday Oil Corp., Ft. Worth	477	889
Clark, N. F., Wichita Falls	233	361
Colony Oil Co., Wichita Falls	3,854	7,495
Crosbie, T. S., San Antonio	2,589	4,013
California Co., Colorado	192,070	236,246
Canyon Oil & Gas Co., Cross Plains	7,282	11,280
Carteret Oil Corp., Jersey City, N. J.	2,056	4,094
Caltex Oil Co., Spokane, Wash.	789	1,096
Camp Oil & Gas Co., Wichita Falls	17,002	36,014
Carter, Roy I., Wichita Falls	3,179	6,649
Caruthers Co., San Antonio	2,793	4,026
Caldwell Guadalupe Pick Up Station, Luling	2,621	2,808
Capitol Oil Co., Orange	4,600	6,900
Cady, C. C., Moran	3,519	6,572
Caprito & Graham, Breckenridge	808	1,455
Canadian Oil Co., Canadian	1,650	1,650
Carter, Fine & Carter, Wichita Falls	3,152	4,976
Cezeaux & Martin, Humble	14,157	21,235
C. G. & C. Oil Co., Wichita Falls	597	1,068
Chapman, P. A., Estate, Waxahachie	38,563	71,962
Chenault, N. B., Wichita Falls	388	759
Chapman, P. A., Jr., Eastland	1,085	1,955
Christie Bros., Wichita Falls	15,971	31,841
Chico Pool Oil Co., Chico, Calif.	1,049	1,108
Chandler, C. G., San Antonio	3,009	4,084

Name— Address	Barrels	Gross Value
Charter Oil Co., Brownwood	2,336	2,570
Chicago Oil & Land Co., Rockdale	1,427	2,898
Cisco Drilling Co., Dallas	3,244	4,196
Cintex Petroleum Syndicate, Laredo	4,317	4,964
Clem Oil Co., Houston	536	805
Clark, R. R., Wichita Falls	3,527	7,252
Clara Oil Co., Wichita Falls	888	1,904
Cline Oil Co., Wichita Falls	3,690	7,640
Cline, W. D., et al, Wichita Falls	622	1,289
Clough, Chas. E., Wichita Falls	2,573	4,791
Clark, Harbin & Baldridge, Wichita Falls	7,783	15,543
Clay, J. D., Houston	2,594	3,522
Clear Lake Oil Co., Rockdale	5,562	11,449
Coons & Hotchkiss, Graham	3,212	6,217
Continental Supply Co., St. Louis, Mo.	1,044	1,976
Consolidated Oil Co. of Texas, Wichita Falls	4,392	9,483
Conway Bros. & Gillman, Cross Plains	29,284	68,160
Cornhuskers Oil Co., Lincoln, Neb.	7,568	8,067
Conner Sons & Cloughley, Gotebo, Okla.	9,201	18,874
Cochard & Williams, Moran	318	576
Corona Petroleum Co., Jersey City, N. J.	1,600	2,925
Cosa Oil Co., Cisco	1,052	2,382
Cohen, Aaron, Wichita Falls	11,849	24,671
Continental Oil Co., Denver, Colo.	153,559	260,572
Conley, Delaney & Dyer Bros., Ranger	1,293	2,626
Coyle Concord Oil Co., San Antonio	2,824	5,385
Commercial Petroleum Co., Brownwood	324	356
Commercial Petroleum Co., Wichita Falls	1,035	2,108
Cowling & Newell Oil Co., Wichita Falls	712	1,426
Cox, Mitchell & Boyd, Wichita Falls	230	493
Cox, Edwin B., Ardmore, Okla.	4,011	7,664
Conner Hyer Production Co., Ft. Worth	317	635
Corlett, W. B., Wichita Falls	3,290	6,791
Conway Bros., et al, Cross Plains	549	1,232
Conway Bros., Cross Plains	4,613	11,083
Coppeck & Coleman, Iowa Park	2,034	4,130
Cotton, J. H. & Co., Iowa Park	3,403	6,870
Cosden, J. S., Inc., Ft. Worth	18,515	41,103
Crown Central Petroleum Corp., Houston	72,890	95,938
Crown Oil & Ref. Co., Houston	22,889	34,334
Cranfill Bros. Oil Co., Wichita Falls	2,037	3,961
Cranfill & Reynolds, Inc., Cisco	87,718	169,114
Crystal Oil Corp. of Texas, Denver, Colo.	3,720	6,960
Cram & Clark, Wichita Falls	4,088	8,568
Cranfill Bros. Oil Co., Dallas	5,160	9,618
C. W. M. T. Oil Co., Wichita Falls	3,459	7,511
Culbertson Co., Wichita Falls	15,200	32,592
Duncan, J. W., Wichita Falls	13,372	28,215
Duquesne Oil Corp., Eastland	2,952	6,803
Derby Oil Co. (The), Dallas	2,876	5,051
Dayton Oil Co., Dayton	1,725	2,597
Daniel, S. B., Wichita Falls	1,775	2,749
Dale Knotts Oil Co., Wichita Falls	300	644
Dale, E. A., (Special), Electra	148	274
Dale, E. A., Oil Co., Wichita Falls	57,067	122,354
Dale & Crawford, Electra	563	1,198
Davis, L. R., Tulsa, Okla.	187	281
Davis, Carolina A., Somerset	705	981
Dallas Bradford Oil Co., Dallas	424	798
Dalton, Jack, Oil Co., Mineral Wells	1,058	2,225
Daniels & Rutis, Wichita Falls	3,639	7,389
Davis Hart Oil Co., Wichita Falls	14,691	30,403
Darby Pet. Corp. of N. Y., Tulsa, Okla.	187	321
Den-Wich Oil Co., Abilene	953	1,947
Deep Sands Oil & Gas Co., Corsicana	368	368
Deutser, B., Trustee, Beaumont	1,737	2,605
Dennis, J. S., Moran	2,291	4,194
Dibble Oil Co., San Antonio	1,836	1,971
Dickey Oil Co., Putnam	1,010	1,961
Dillon & Glasscock, San Antonio	620	813
Dixon Creek Oil Co., Amarillo	9,112	13,209
Donnelly, G. J., Trustee, Ft. Worth	416	932
Domestic Oil Co., Cisco	2,354	5,251
Dominion Oil Co., Tulsa, Okla.	1,594	2,281
Dozier, B. D., et al, Cross Plains	4,074	8,972
Douglas Oil Co., Tulsa, Okla.	9,594	11,993
Drillers Development Co., Electra	4,068	8,480
Driskill, T. Lorain, Moran	4,180	7,565
Dursten, H. H., Trustee, Houston	986	1,756
Eastland Oil Co., Ft. Worth	37,323	63,290
Easton, E. S., Wichita Falls	3,175	6,497
Eby, Webb T., Eastland	939	1,871
Elbert, Follour & Herbert, Beaumont	1,897	2,845
Edgerly Petroleum Co., Orange	39,088	58,632
Eddy Oil Co., Beaumont	1,370	2,067
Eggers, J. E., San Antonio	1,383	1,977
Electra Gulf Oil Co., Electra	4,866	10,270
Ellis & Anderson, San Antonio	178	253
El Paso, Burkburnett Oil Co., El Paso	89	168
Electra-Callahan Oil Co., Electra	9,357	19,771
Electra Production Co. Inc., Electra	4,506	9,399
Ellwood Co., (The), Wilwaukee, Wisc.	4,757	7,136
Ellison Oil Co., Thorndale	40	81
Empire Gas & Fuel Co. (Me.), Bartlesville, Okla.	123,035	254,572
Erie Investment Limited of Texas, Toronto, Can.	1,187	2,234
Erickson, David, Wichita Falls	277	576
Ernest Oil Co., Rockdale	5,775	11,963
Eureka Producing Co., Wichita Falls	27,589	55,441
Eureka Drilling Co., Wichita Falls	321	668
Evans Oil Co., San Antonio	3,652	3,906
Evangeline Pet. Co., Wichita Falls	3,450	7,072
Exley & Covert, Iowa Park	880	1,725
Ferguson & Watson, Electra	2,836	5,939
F. H. E. Oil Co., Sherman	19,250	33,922
Four States Oil Co., Abilene	1,232	2,630
Fensland Oil Co. of Texas, Denver, Colo.	9,326	17,892
Farish & Ireland Lease, Houston	5,256	6,570
Ferguson, Hawkins & Hester, Wichita Falls	4,700	10,464
Ferguson, W. R., Wichita Falls	831	1,768
Fisher & Gilliland, Wichita Falls	12,942	28,289
Five Rivers Oil & Gas Co., Wichita Falls	1,204	2,531
Fisher, Henry J., New Port, N. Y.	647	2,857
Flynn, W. B., Beaumont	7,585	11,430
Florence Oil Co., Oklahoma City, Okla.	10,004	22,050
Fogle Oil Co., Minerva	2,532	4,743
Fort Ring Oil & Gas Co., Ft. Worth	967	2,046
Fox, Perry I., Ranger	255	501
Fountain Production Co., Saratoga	7,058	10,587
Fresno Oil Co., Wichita Falls	29,512	59,431
Franchot, D. W. & Co., Tulsa, Okla.	328	569
Freeman Hampton Oil Corp., Wichita Falls	15,651	33,969
Frontier Oil Co., San Antonio	18,296	33,562
Franklin, Wirt, Ardmore, Okla.	14,548	30,815
Fuchs, Fritz, Taylor	3,591	7,127
Fuller, E. E., Wichita Falls	450	855
Fulbright, Crooker & Freeman, Houston	1,316	2,653
Fuller, Daniels & King, Wichita Falls	4,482	10,737
Gardner Bros. & Collins, Wichita Falls	9,716	20,103
Gladys Belle Oil Co., Tulsa, Okla.	6,153	9,351
Gholson, Thompson, Barkley & Crotty, Ranger	9,042	18,732
Graham & Caprito, Breckenridge	1,140	2,322
Glenridge Oil Corp., St. Louis, Mo.	5,120	9,430
Gilliland Oil Co., Tulsa, Okla.	1,801	3,951
Glass Bros., Minerva	1,486	2,561
Galena Signal Oil Co. of Texas, Houston	103,648	164,905
Galves Oil Corporation, Tulsa, Okla.	6,313	11,935
Galligher & Lawson, Desdemona	501	896
Galligher & Lawson et al, Desdemona	3,665	7,596
Gates Oil Co. of Wyoming, Oklahoma City, Okla.	7,316	9,227
Gates, F. M., Wichita Falls	894	1,927
Gardner, J. A. (Lease Account) Wichita Falls	5,013	10,513
Gates Oil Co., Ardmore, Okla.	6,083	13,885
General Oil Co., (The), Houston	2,225	4,852
Gholson, Mormon & Dorsey et al, Ranger	3,561	8,312
Gilbert & Co., Beaumont	6,411	9,617
Ginsburg & Bohner, Wichita Falls	6,742	13,964
Gillam Logan Oil Co., Ft. Worth	5,630	4,605
Gilliland, Scott & Omohundro, Wichita Falls	3,303	6,956
Glasscock, Rosa V., San Antonio	715	1,052
Glasscock Leasing Syndicate, San Antonio	3,658	5,671
Godley Oil & Gas Co., Henrietta	29,509	58,138
Goolsbee & Graham, Wichita Falls	206	386
Goolsbee & Goolsbee, Wichita Falls	253	497
Godfrey, F. L., Enid, Okla.	151	305
Golcondo Oil Co., Trust Estate, Wichita Falls	361	691
Goodloe & Harris, Putnam	32	66
Golden Cycle Oil Co. (The), Dalhart	548	1,079
Golden West Oil Co., San Antonio	51,905	58,467
Goodrich, Robert D., San Antonio	1,876	2,815
Goodloe, Harris, Smith & Snyder, Putnam	6,870	14,190
Granit Oil & Gas Co., Montrose, Calif.	448	967
Grayce Oil Co., Burkburnett	14,869	31,800
Graham, H. L., Wichita Falls	2,172	4,125
Grand Duke Production Co., Muskogee, Okla.	339	662
Grayburg Oil Co., San Antonio	336,886	395,681
Graham & Lash, Moran	5,065	12,424
Grady, D., Electra	706	1,575
Groupe No. 1 Oil Co., Big Lake	1,295,841	2,520,898
Green, C. I., Wichita Falls	2,197	4,109
Gray, T. H., Ft. Worth	15,022	19,073
Gulf Coast Oil Corp., Houston	27,539	41,308
Gultex Production Co., Waxahachie	5,395	11,629
Gutzler & Cottingham, Indianapolis, Ind.	78	147
Gulf Production Co., Houston	3,307,880	5,330,743
Gwynn, P. F., Trustee, Iowa Park	3,836	7,852
Gwynn, P. F., Wichita Falls	3,746	7,416

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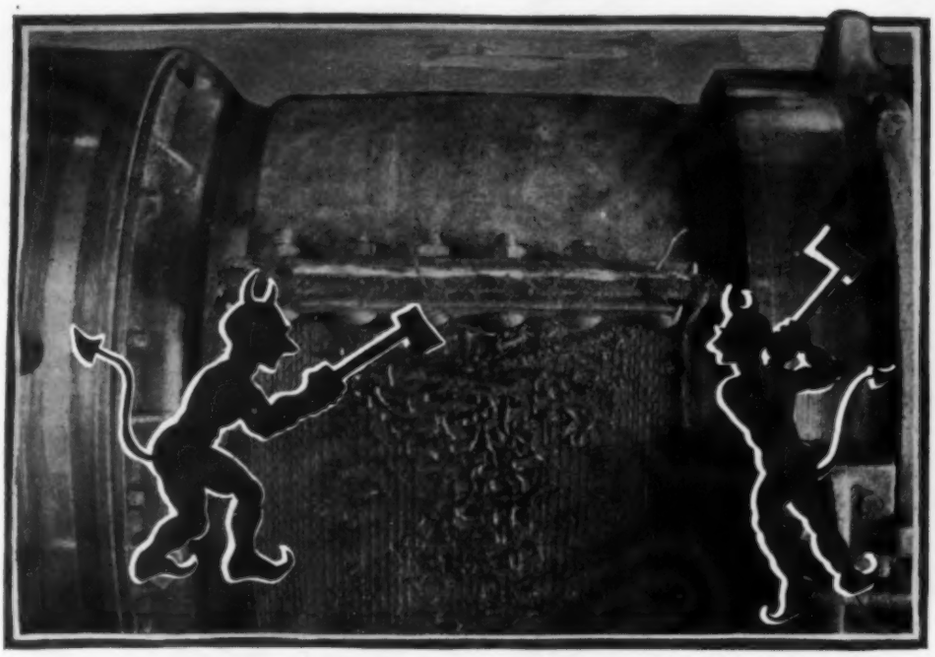
Name— Address	Barrels	Gross Value
Hockaday & Shaw, Wichita Falls	2,010	4,221
Halmack Oil Co., Dallas	3,050	5,460
Hunt, J. C., Wichita Falls	1,836	2,749
Hughes, Wm. K., Trustee, St. Louis, Mo.	1,709	3,206
Hooser Oil Co., Dallas	31,335	60,871
Helene Oil Corp., Wichita Falls	3,004	5,816
Hoopes, W. T. Burkburnett	193	387
Hemphill, M. R., Graham	1,459	2,855
Hanover Co., (The), Wichita Falls	10,009	19,143
Hankamer, Earl C. & Co., Sour Lake	2,408	3,622
Hamilton, H. L., San Antonio	7,828	15,183
Hambleton, George, San Antonio	650	1,002
Hart-Mexia Syndicate, Ft. Worth	928	1,907
Hart Oil Corp., Ft. Worth	695	1,426
Harvey, R. A., Houston	845	1,056
Hardie, J. M. & Co., Sour Lake	633	950
Hamon, Jake L., Ardmore, Okla.	7,874	14,652
Hardy Oil Co., Wichita Falls	1,073	2,163
Hammon, W. H. et al, Wichita Falls	11,655	24,978
Haggard, J. E., Wichita Falls	2,393	5,025
Hamilton & Wilson, Wichita Falls	8,755	18,473
Harpool, J. C., Ranger	348	676
Hardie, Joe M., Sour Lake	2,090	3,283
Hagaman Refining Co., Ranger	870	1,579
H. B. J. Oil & Gas Trust, Wichita Falls	2,743	5,817
Helvetia Oil Co., San Antonio	15,861	29,878
Hemby, J. M., Electra	852	1,767
Henderson, E. R., Trustee, Tulsa, Okla.	212	354
Hester, Hawkins & Ferguson, Tr., Wichita Falls	5,809	12,984
Hefley, McIntosh & Thomas, Cameron	947	1,781
Heiber, W. S., Electra	29	55
Higgins Oil & Fuel Co., Houston	55,740	79,911
Hickory Oil & Gas Corp., Ft. Worth	313	637
Hitchman & Howard, San Antonio	2,308	3,699
Hickok Producing & Dev. Co., Toledo, Ohio	279	402
Hillyer, F. L. et al, San Antonio	2,306	2,698
Houston Oil Co. of Texas, Houston	8,395	14,534
Houston Production Co., Houston	34,518	45,639
Homaokla Oil Co., Oklahoma City, Okla.	6,203	14,329
Hofmeir & Deegans, Ft. Worth	926	1,741
Hobbs Oil Co., Wichita Falls	4,727	9,323
Hoo Hoo Oil Co., Burkburnett	111	208
Hobson & Voorhees, San Antonio	1,406	2,380
Howard Petrol Co., Wichita Falls	489	1,037
Hoffman & Page, Eastland	1,310	2,599
Howell & Easton, Electra	566	1,137
Howell, J. H., Trustee, Electra	467	960
Housman, D. H. & Co., Dallas	38	79
Hope Petroleum Co., Tulsa, Okla.	7,318	13,538
Horn, Jno. E. & E. S. Horn, Kansas City, Mo.	1,296	2,662
Holderman, J. H., Cisco	185	379
Hoffer Oil Corp., Ft. Worth	4,734	8,923
Hofmeier, Jno. B., Ft. Worth	2,407	5,195
House & Lewis Oil Co., Cameron	1,557	2,960
Hub Oil Co., Dallas	489	1,176
Humble Oil & Ref. Co., Houston	3,513,294	6,150,857
Hueco Ranger Oil Co., El Paso	301	610
Humphrey & Merrett, Wichita Falls	1,822	3,892
Hughes, J. K. Dev. Co., Mexia	370,730	687,625
Hughes, J. K. Oil Co. Inc., Mexia	69,261	126,076
Humphrey's Corporation, Houston	52,014	91,660
Hoffman & Killingsworth, Wichita Falls	11,863	14,462
H. Y. Oil Co. Inc., Ft. Worth	17,593	35,213
Hyde Production Co., Houston	13,021	21,890
Illseng, A. G., Ft. Worth	17,252	32,360
Idaho Oil Co., San Antonio	2,596	4,144
Inland Oil Co., Wichita Falls	5,621	11,542
Infield Petroleum Co., Austin	1,727	3,164
Interocean Oil Co., Iowa Park	1,102	2,168
Ironland Oil Co., Wichita, Kans.	133	286
Jones Oil Co., Wichita Falls	6,572	13,816
Johnson Bros., San Antonio	19,333	35,349
Japhet, C. P., Houston	401	602
Jackson & Co., San Antonio	1,830	2,792
Jackson, J. S., Trustee, Sour Lake	2,496	3,959
Jameson, Chas. M., Moran	1,525	3,356
Johnson, O. C., Trustee, Laredo	1,302	1,741
Jones, C. A., Strawn	1,751	3,037
Jones, Edwin M., El Dorado, Ark.	63,467	123,297
Jones & Merrett, Burkburnett	782	1,567
Jones, J. E., Wichita Falls	2,704	5,900
Junior Oil Co., Cross Plains	2,431	5,759
Julia Oil Co., Sour Lake	4,146	6,220
Judson Oil Co., Tulsa, Okla.	16,102	34,323
Junior Oil & Gas Lipe Co., Corsicana	2,608	2,784
Knotts, F. F., Wichita Falls	659	1,412
Kate Bell Oil Co., Dallas	3,425	7,470
Kavanaugh Petroleum Co., Houston	1,055	2,057
Kay, Jno. C., Trustee, Wichita Falls	6,187	13,406
K. B. H. T. Syndicate, Vernon	358	792
Keough Bros., Cisco	5,500	12,778
Kerr, T. P., Corsicana	320	583
Kemp, Munger, Allen Oil Co., Wichita Falls	9,760	20,614
Keener Oil & Gas Co. of Texas, Tulsa, Okla.	6,332	11,756
Kent, G. C., Corsicana	91,846	178,162
Keath, E. M., Desdemona	2,146	4,366
Keen & Wolf Oil Co., Shreveport, La.	32,082	48,123
Kemrow Producing Co., Wooster, Ohio	20,976	43,321
Kent Middleton Ref. Co., Corsicana	6,450	13,075
Kirby Petroleum Co., Houston	37,893	71,036
Kishi, K., Terry	278	418
Kimmell & Dillard, Wichita Falls	6,200	12,684
Kirk & Brewer, Gorman	16,666	36,031
King Petroleum Corp., Wichita Falls	3,818	7,364
King & Daniels, Wichita Falls	712	1,558
Killam Condron Oil Co., Laredo	1,772	1,772
Kilgore, M. H., Beaumont	1,001	1,502
Killam, O. W., Laredo	228,004	228,012
Kitselman & St. Albans, Laredo	57,267	67,575
Klemcke, Geo., Trustee, Von Ormy	2,131	3,432
Kleiner Bros., Cisco	4,625	9,198
Kleinfeeder, B. F., Breckenridge	4,796	9,080
Kornfield, Mrs. Fannie, Tulsa, Okla.	248	455
Kolp, C. F., Electra	24,973	50,143
Koury, Mike, Houston	2,874	5,899
Kolp, C. F., Agent, Electra	2,688	5,162
Kurz Oil Co., Somerset	743	984
Kurz, A. A., Somerset	339	496
Kuhlemerer & Kleiner Oil Co., Cisco	1,916	3,872
Kurz, A. A. (Jokel Farm), Somerset	58	71
Long, Roy I. et al, Navasota	1,924	1,924
Laredo Oil Co., Laredo	5,304	5,469
Langford, W. S., Wichita Falls	2,670	5,194
Lewis, J. E. et al, Eastland	3,110	6,228
Laclede Petroleum Co., Dallas	156	351
Lake View Oil Co., Sour Lake	17,103	25,654
Lamb, Geo. E., Brownwood	3,474	4,514
Landreth Production Co., Breckenridge	226,281	427,253
Larkin, W. B., Wichita Falls	465	954
Lange, I. A., Atty. in fact, Wichita, Kans.	931	2,002
Lawson & Pace, Nowata, Okla.	5,366	11,244
Lay Oil Co., Cisco	1,010	1,961
Lawson, Eugene B., Nowata, Okla.	62,101	125,301
Lake Erie Trust Co., Trustee, Cleveland, Ohio	1,058	2,271
Lamarque Co. (The), Texas City	1,380	1,573
Leonard, Geo., San Antonio	262	303
Lee Phillips Oil Co., Minerva	1,487	2,719
Lee, Homer, Wichita Falls	2,434	5,292
Lee Oil Co., Minerva	2,595	5,148
Lee-Haus Oil Co., Inc., Minerva	1,937	3,831
Lee-Nehause Oil Co., Inc., Minerva	580	1,177
Lewis Oil Co. & Natl. Ref. Co., Pittsburgh, Pa.	47,590	86,947
Lewis Oil Co., Pittsburgh, Pa.	1,736	3,143
Lebow, C. H., Tulsa, Okla.	1,236	2,665
Leonard Oil Co., San Antonio	504	770
Lee-Cook Oil Co., Electra	1,250	2,568
Letwin, Sam, Breckenridge	1,320	2,560
Lee, R. Q., Cisco	229	472
Lesh, P. F., Wichita Falls	5,685	10,917
Light Oil Co., Beaumont	781	1,221
Little Caddo Syndicate, Ft. Worth	5,294	8,716
Livingston, Henry S., Ft. Worth	119	199
Little, Wm., Breckenridge	602	1,091
Lion Tamers Oil Corp., Albany	2,689	4,488
Linedo Oil Co., Lincoln, Neb.	5,507	5,614
Liberty Oil & Gas Trust, Wichita Falls	2,821	5,036
Lone Star Gas Co., Dallas	14,977	31,171
Lowry Oil Corp., Wichita Falls	4,711	9,704
Lone Star Ref. Co., Wichita Falls	675	1,231
Lowe, Delaney & Carter, De Leon	19,134	41,346
Louisiana Oil & Ref. Co., Shreveport, La.	31,547	47,155
Long, F. M., Humble	14,915	19,192
Lomax, Thornton, Wichita Falls	47,565	102,466
Lucky Six Oil & Gas Co., Bangs	156	171
Lucey Petroleum Co., Dallas	66,113	130,647
Luckey & Barkley, Rockdale	283	530
Lytle Oil Co., Lytle	408	519
Meredith, J. D., Moran	726	1,039
Martin Bros., New York City	1,570	2,066
McBride, W. C., Inc., St. Louis, Mo.	3,595	5,157
McGlothlin, Mrs. L. W., Burkburnett	1,057	1,900
Miller & Miller, Putnam	883	1,856
Mid-Continent Petroleum Co., Tulsa, Okla.	26,398	52,840
Miller, Herbert G., Eastland	75	121
Magee Bros., Electra	8,332	18,186
Marnet Oil Co., New York, N. Y.	3,378	5,926
McLester Oil Co., Ranger	2,384	5,724
McLester Oil Co., Breckenridge	7,873	15,241
Murchison & Fain Oil Co., Wichita Falls	183,206	387,111
McDonald, W. W., et al, Dallas	2,124	4,092
Matador Oil & Gas Co., Quanah	421	874
Mary Elizabeth Oil Co., Dallas	13	25
Madison Oil & Gas Co., Ft. Worth	2,279	4,987
Magnolia Petroleum Co., Dallas	1,476,523	2,775,553
Maben Oil Corp., Wichita Falls	1,084	2,109
Marsalis Bros., Humble	3,410	5,115
Margay Oil Corp., Tulsa, Okla.	4,596	9,799
Maer & Staniforth, Wichita Falls	14,351	32,635
Mann & Forbes, Graham	4,061	8,604
Martin & Harrison, Houston	4,607	7,005
Marland Oil Co., Ft. Worth	76,877	104,784
Maskell & Maskell, Humble	3,065	4,597
Magee & Steps, Electra	5,567	11,858
Martin Petroleum Co., Humble	4,467	6,702
Maxson Co., Wichita Falls	5,590	11,674
Mendenhall, L. F., Oil Co., Cross Cut	8,119	18,317



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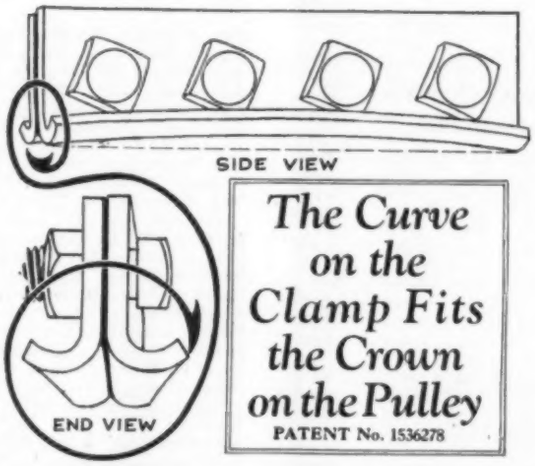

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Fort Worth, Texas Mexia, Texas

Name— Address	Barrels	Gross Value
Medina Oil & Gas Ass'n San Antonio	378	560
Meridian Petroleum Corp., Tulsa, Okla.	5,625	12,247
Mecom Oil Co., Houston	27,612	41,418
Mennis, G. W., Wichita Falls	3,074	6,452
Minntex Oil Corp., Wichita Falls	758	1,405
Mitchell, Amos J., Wichita Falls	47	93
Miami Laredo Oil Co., Laredo	999	1,015
Mills & Garrity, Corsicana	1,681	2,521
Minerva Petroleum Co., Minerva	2,570	7,357
Minor Oil Co., Beaumont	10,362	15,554
Mid-Kansas Oil & Gas Co., Findley, Ohio	117,803	232,285
Middleton, Tex., Oil Syndicate, Eastland	640	1,134
Mitcham, G. P., Ft. Worth	804	1,428
Miller, Herbert G., Eastland	127	215
Milham (The) Corp. of Texas, San Antonio	6,941	12,232
Middleton, J. H., Collinsville, Okla.	2,269	3,449
Milam Production Co., Rockdale	2,480	5,010
Midwest Exploration Co., Amarillo	4,410	4,410
Midco. Oil Corp., Tulsa, Okla.	187	336
Mirando Oil Co., Laredo	58	58
Mitchell, Jones & May, Cross Plains	5,923	12,590
Moore, Frank L., Trustee, Tulsa, Okla.	4,852	9,762
Mook Texas Oil, Inc., Ft. Worth	23,793	52,157
Mohegan Oil Co., Mohegan Lake, N. Y.	385	568
Moore & Henderson, Tulsa, Okla.	646	1,198
Moore, N. A., Eastland	968	1,755
Mogul Oil Corp., Eastland	227	337
Montgomery, Rae & Montgomery, Sedwick	2,852	5,562
Morrison, St. John & Kleiner Bros., Cisco	8,296	16,469
Moss & Keys, Mexia	191	339
Moss & Keeling, Mexia	13,340	27,880
Moutray Oil Co., Cisco	8,898	8,898
Moorman, Cull C., Trustee, Ranger	2,568	5,638
Morton, A. D., Bartlesville, Okla.	865	1,525
Morris Clifford, et al, Wichita Falls	12,131	24,141
Moran, J. J., Wichita Falls	1,887	3,810
Murphy Oil Co. of Pa., Philadelphia, Pa.	1,065	1,551
Mutual Oil Consolidated, Ft. Worth	1,255	2,554
Multiple Oil Co. (The), Wichita Falls	6,251	13,053
M. & V. Oil Co., Wichita Falls	4,479	9,661
McClure, W. D. & Son, Iowa Park	1,497	3,221
McCarty, Ed., Galveston	609	1,176
McCarter, R. C., Cisco	1,644	3,282
McCullough, Everett, Receiver, Wichita Falls	514	1,039
McDabb Oil Co., Wichita Falls	2,471	5,076
McDaniel, E. R., Cisco	568	1,190
McDonald, A. C. & M. C., Putnam	2,800	5,888
McEwan, J. P., Trustee, Ft. Worth	2,003	3,872
McElroy Oil Co., Amarillo	10,401	14,604
McLester, Jerome, Cisco	4,546	8,866
McMann Oil & Gas Co., Tulsa, Okla.	67,901	129,474
McNamara Oil Co., Beaumont	3,860	5,790
McNallen & Griffin, Tulsa, Okla.	5,435	9,700
New England Oil & Refining, Hampton, Mass.	127	167
Nortex Drilling & Dev. Co., St. Louis, Mo.	396	804
National Oil Co., San Antonio	1,150	1,787
National Supply Co. of Texas, Toledo, Ohio	96	159
Navarro Oil Co., Houston	110,557	202,708
National Petroleum & Ref. Co., Wichita Falls	2,039	4,548
Newblock Oil Co. of Texas, Tulsa, Okla.	11,921	22,125
New Domain Oil & Gas Co., Pittsburgh, Pa.	8,636	15,007
Netherton & Heydrick, Trustee, Wichita Falls	713	1,438
Nellis, J. A., Putnam	682	1,140
Necessity Oil Corp., Dallas	491	800
Nine Hundred Oil Co., Wichita Falls	2,203	4,450
Nickel, G. W., et al, Putnam	5,802	4,433
Norman Oil Co., Wichita Falls	5,848	12,361
Noble, Chas. F. Oil & Gas Co., Tulsa, Okla.	4,925	9,176
Noak Oil Co., Rockdale	3,648	7,427
Norba Oil Co., Wichita Falls	3,012	6,475
Norday Oil Co., Wichita Falls	10,428	21,737
North American Oil & Ref. Co., Dallas	5,286	10,315
Nueva Oil Co., Laredo	2,158	2,214
Number Nine Oil Co., Tulsa, Okla.	4,008	8,149
Nutt & Gates, Wichita Falls	1,490	3,696
Oakwood Oil Syndicate, Ft. Worth	1,870	3,834
O'Donohoe & Gates Drilling Co., Wichita Falls	23,829	29,483
Offenbacher, Emile, Tulsa, Okla.	425	822
Offenbacher, Emile, Trustee, Tulsa, Oklahoma	60	110
Oil Investment Co., Wichita Falls	9,637	18,961
Oktoha Co., Tulsa, Oklahoma.	1,127	2,349
Old Colony Oil Co., Dayton	1,914	2,871
Old Ocean Oil Co., Kansas City, Mo.	7,465	9,658
Omilak Oil Co., Spokane, Wash.	532	771
O'Neil, H. A., Wichita Falls	2,076	3,907
Orange Petroleum Co., Orange	124,585	164,309
Oriental Oil Co., Dallas	3,155	6,124
Orth, Thos. R. T., Bartlesville, Okla.	283	523
Osage Dev. Co., Thurber	131,469	262,367
Overby, J. D., Iowa Park	1,159	2,373
Owenwood Oil Corp., Ft. Worth	4,311	7,819
Owenwood Pool No. 3 (J. W. Robbins, Tr.), Ft. Worth	15,555	29,192
Oxford Oil Co., Houston	60,656	113,727
Ozark Petroleum Co., San Antonio	1,215	1,836
Parry Oil Co. of Texas, Ft. Worth	1,687	3,121
Parkersburg Drilling Co., Cisco	4,361	8,352
Palmer & Chenault, Wichita Falls	496	1,020
Paraffine Oil Co., Houston	11,378	17,030
Paggi, Chas. & Co., Beaumont	6,116	9,176
Paggi Bros. Oil Co., Beaumont	9,774	14,662
Panhandle Refining Co., Wichita Falls	80,818	157,514
Palmer, Fredie Oil Co., Rockdale	311	549
Park, Frazer & Scott, Wichita Falls	2,923	6,316
Payne, P. G., et al, Wichita Falls	997	2,140
Patten, Nannie S. (Survey), Canadian	1,579	1,809
Patterson, W. A., Ft. Worth	1,679	3,735
Pandem Oil Corporation, Tulsa, Okla.	14,131	29,020
Petroleum Developing Co., New York, N. Y.	1,097	2,016
Pender Production Co., Denton	23,288	42,317
Pennok Oil Co., Tulsa, Okla.	22,403	43,285
Perkins, J. J., Wichita Falls	5,022	10,729
Perkins & Cullum, Wichita Falls	71,341	150,939
Petroleum Producers No. 2, Wichita Falls	105,262	217,579
Pepin & Bennett, Trustees, East Hampton, Mass.	127	167
Penn, R. R., Dallas	7,614	15,683
Phillip Bros., Beaumont	2,441	3,662
Phillip & Milam, Chelsea, Okla.	106	208
Phillips Oil Co., San Antonio	1,092	1,168
Phillips Petroleum Co., Bartlesville, Okla.	192,632	407,402
Pivot, M. E., Sour Lake	5,319	7,979
Pitzer & West, Breckenridge	14,568	27,098
Pinto Oil Co., Mineral Wells	310	310
Pioneer Oil Gas & Refg. Co., Danville, Ill.	1,987	3,018
Pierce Petroleum Corp., New York, N. Y.	3,262	6,932
Plains Production Co., Wichita Falls	17,935	37,005
Planet Petroleum Co., Bartlesville, Okla.	53,558	112,193
P. & M. Oil Co., Shreveport, La.	138	284
Pois, M., Trustee, Wichita Falls	373	752
Pois & Kruger, Trustee, Wichita Falls	14,354	29,980
Powell, J. L., Wichita Falls	667	1,355
Porter & Barnard, Wichita Falls	247	527
Porter, B. E. & Co., Wichita Falls	307	654
Powers Production Co., Houston	4,371	6,262
Pomono Mutual Oil Syndicate, Pomono, Calif.	5,403	11,909
Pomono Texas Oil Syndicate, Pomono, Calif.	184	325
Primrose Oil Co., Sour Lake	1,017	1,526
Prairie Oil & Gas Co., Independence, Kans.	399,947	816,614
Progressive Production Co., Kansas City, Mo.	6,662	14,521
Prairie Lee Production Co., San Antonio	17,543	18,755
Priddy, Walter M., Wichita Falls	15,756	30,882
Producers Supply & Tool Co., Marietta, O.	1,262	2,462
Prescott Phoenix Oil & Gas Co., Wichita Falls	2,045	3,893
Prescott Phoenix Oil & Gas Co., Muskogee, Okla.	339	662
Preston Oil & Gas Co., Brownwood	348	638
Price Russell & Co., Ranger	7,412	16,014
Prewitt Syndicate Inc., Humble	6,852	10,689
Pure Oil Co., Columbus, O.	1,593,636	2,990,320
Quincy Oil Co., Chillicothe	159	330
Quakins Petroleum Co., Mirando City	11,211	24,384
Ray & Massie, Wichita Falls	53,396	112,002
Ranger Gulf Corp., Tulsa, Okla.	7,687	14,741
Ramming, R. W., Wichita Falls	11	22
Ramming, W. F., Wichita Falls	27	56
Ramming, Staley & Ramming, Wichita Falls	883	1,980
Ramming & Satnders, Wichita Falls	5,357	11,149
Rayzor, J. P., Wichita Falls	197	399
Ray Featherstone Oil Co., Wichita Falls	6,161	12,856
Republic Production Co., Houston	601,221	933,244
Red River Oil Co., Tulsa, Okla.	18,801	38,296
Reclamation Co., Ft. Worth	18,025	38,296
Reinhart, M. J., Trustee, Oklahoma City, Okla.	1,096	2,293
Rentex Oil Co., San Antonio	7,131	10,209
Reliance Oil Co., Houston	416	624
Regna Oil Co., Saratoga	5,237	6,796
Reiter Foster Oil Corp., Tulsa, Okla.	7,058	14,282
Rhodes & Higher, Breckenridge	17,032	34,905
Rio Bravo Oil Co., Houston	316,468	511,108
Riner & Bailey, Wichita Falls	82,382	183,281
Riley, Henry & Co., Breckenridge	601	1,075
Rio Grande Petroleum Co., Houston	10,408	10,674
Rountree & Simpson, Rockdale	370	752
Rockdale Oil Co., Inc., Minerva	480	871
Robertson, J. A. & L. A., Santa Anna	225	337
Rowe, M. D., Wichita Falls	307	573
Robinson, Arthur D., Dallas	10,808	23,718
Roxana Petroleum Co., St. Louis, Mo.	164,988	311,003
Rocky River Oil Co., Wichita Falls	599	1,146
Rosenberg, Jacob, Tulsa, Okla.	243	466
Robinson, J. B., Sour Lake	1,046	1,569
Rockwall, J. A. & Co., Warren, Pa.	3,526	6,223
Roser & Pendelton, Breckenridge	16,735	31,743
Roberts, M. C., & S. C., Dallas	154	203
Root, C. M., et al' Eastland	16,306	29,983
Root & Rhodes, Eastland	32,481	71,183
Ross Amigos Oil Co., Laredo	7,660	8,963
Ross Segunda Oil Co., Laredo	835	1,003
Rolyat Production Co., Houston	8,659	12,899

Name— Address	Barrels	Gross Value
Rountree Lee Oil Co., Rockdale	1,718	3,215
Ross, D. M., Wichita Falls	1,434	3,013
Ross & Slicker Oil Co., Ft. Worth	1,449	2,870
Rowan, A. H. Trustee, Corsicana	3,317	6,180
Rountree White & Simpson, Rockdale	7,504	12,498
Robert Oil Corp., Breckenridge	29,736	61,692
Roamer Oil Co., Wichita Falls	5,626	10,978
Rockdale Development Co., Rockdale	1,218	2,496
Rockdale, Jr., Oil Co., Rockdale	1,201	2,532
Rubsom & Hunter, Wichita Falls	7,112	8,720
Ruyle Farm Oil Co., Wichita Falls	10,820	22,778
Russell Sanderson Oil Co., Ft. Worth	1,009	2,112
Ruby Oil Co., Minerva	1,243	2,557
Rumbaugh Reeder & Cook, Wichita Falls	741	1,145
Ruthada Oil Co., Ardmore, Okla.	2,660	5,405
Ryan Petroleum Co., Bartlesville, Okla.	55,256	119,847
Rycade Oil Corp., Houston	180,876	229,994
Rydal Oil Co. (Coursen Matches) San Antonio	26,550	32,659
Rydal Oil Co., San Antonio	4,492	5,615
Samuel West & McCandless, Robinson, Ill.	456	828
San Benard Oil Co., Beaumont	3,743	5,615
Saunders, Jno. R., Wichita Falls	27	56
Saratoga Oil Co., Wichita Falls	3,656	7,766
Sammel, J. B., Robinson, Ill.	4,656	9,008
Scarbrough, W. A., Burkburnett	2,200	5,546
Schlicher Oil Co., Beaumont	809	1,214
Schoolfield, R. E., Wichita Falls	249	497
Schott Oil Co., Laredo	3,266	3,327
Schulz & Pois, Wichita Falls	1,917	3,997
Seybert Bros. & Barger, Mooringsport, La.	2,499	4,874
Senter, E. J. Jr., Dallas	514	965
Sessions, I. P., Rockdale	596	1,049
Shappell, T. O., and Sons, Wichita Falls	4,120	8,564
Shappell Oil Co., Wichita Falls	94,321	198,329
Shaw & Rathke, Wichita Falls	53,412	112,631
Sheman Oil & Gas Co., Pittsburgh, Pa.	180	342
Shertzer Bros., Dewey, Okla.	11,587	24,548
Shackelford Oil Co., Putnam	4,723	9,440
Shade & Whittaker, Sweetwater	379	801
Shaw Fox & Adams, Burkett	5,908	8,497
Sinclair Oil & Gas Co., Houston	132,763	198,803
Sinclair Oil & Gas Co., Tulsa, Okla.	63,125	132,309
Simms Oil Co., Dallas	425,641	838,960
Sipe Springs Oil Co., Sipe Springs	48	80
Silurian Oil Co., St. Louis, Mo.	4,906	8,379
Sirman, S. J., Oil Co., Brownwood	7,691	8,545
Silk, W. W., Wichita Falls	80	158
Sink, Joel, Corsicana	140	249
Sitrin, Sam and Morris, Tulsa, Okla.	333	600
Sigler Oil Co., Inc., Wichita Falls	2,794	4,724
Silk Bullington & Clark, Wichita Falls	12,423	18,600
Sirconich & Thomas, Houston	2,782	3,533
Skinner, E. W., Oil Co., Saratoga	5,826	7,739
Skelley Oil Co., Tulsa, Okla.	84,605	147,849
Slick, T. B., Oklahoma City	14,946	32,420
Smith, E. L., Oil Co., Mexia	90,074	185,233
Smith, R. E., Corsicana	552	1,241
Smith, A. C., et al, Nacogdoches	1,117	2,326
Snider, C. W., Wichita Falls	3,439	7,642
Snowden & McSweeney Co., New York, N. Y.	58,553	124,804
Somerset Crude Oil & Refg. Co., San Antonio	6,056	9,467
Somerset Oil Co., San Antonio	1,658	2,297
Southern Petroleum Co., Houston	8,601	12,902
Southwestern Petroleum Co., Tulsa, Okla.	516	991
Southern States Lease & Production Co., Los Angeles, Calif.	2,232	5,402
South Stephens Oil Syndicate, Ft. Worth	166	312
Southern Drilling & Prod. Co., Bay City	552	829
Speed, C. D., Corsicana	156	283
Sprawls, Harwell & Cook, Abilene	1,005	2,136
Steele, Chas., Moran	394	667
Stull, R. O., Wichita Falls	23	44
St. Louis Oil & Devp. Co., Wichita Falls	840	1,644
Stella Oil Co., Beaumont	9,395	14,039
States Oil Corp., Eastland	56,327	122,034
Standard Oil Land & Leasing Co., Electra	340	711
Stovall, E. C., Graham	1,836	3,775
Staley, Mashburn Oil Co., Wichita Falls	310	593
Stephens Oil Co., Sour Lake	930	1,395
Stone, F. W. & Co., Cross Plains	4,177	9,325
Standifird Bros., Iowa Park	1,929	3,514
Strawn Petroleum Co., Denver, Colo.	7,506	15,931
Sturm, H. L., Ardmore, Okla.	118	217
Strauss Allen Oil Co., Wichita Falls	4,941	10,289
Staley, J. A., Wichita Falls	6,842	14,346
Staley, J. A. & Co., Wichita Falls	9,653	20,028
Staley & Fritz, Wichita Falls	6,781	13,917
Staley, Langford & Wynne, Wichita Falls	583	1,145
Staley & Wynne, Wichita Falls	159,486	332,271
Stout Petroleum Co., Brownwood	66	97
Stroube & Stroube, Corsicana	145,158	285,253

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We continue to manufacture our Type "A" Swab, for cleaning out and for production runs of short duration, and maintain complete stocks of cups and parts for the Type "A" Swab.

Construction of Type "E" Production Swab

The new swab has a tool joint top and an extra large mandrel and check valve enabling it to drop rapidly through the fluid when running in. The perforated sub and mandrel are a single piece of steel, as shown by the cross section here with. To change cups the check valve at bottom is simply unscrewed, after which the two cup assemblies and the loose sleeve which separates them, readily slip off the mandrel, and new cups are instantly slipped into position.

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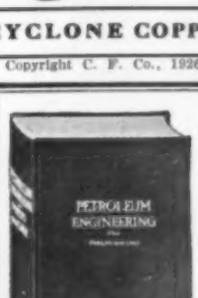

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Name— Address	Barrels	Gross Value
St. Mary's Oil & Gas Co., St. Mary's, W. Va.	13,620	26,24
Stock, H. I., Cisco	2,925	6,08
Star Drilling Co., Wichita Falls	6,263	13,16
Stewart, W. B., Robinson, Ill.	590	1,22
Superior Oil Co., Superior, Wisconsin	42	8
Sun Oil Co., Dallas	438,410	779,14
Supreme Oil Co., Orange	6,004	9,00
Superior Oil & Prod. Co., Lexington, Ky.	2,853	5,384
Sunny Jim Oil Co., Tulsa, Okla.	5,764	5,620
Summerfield Oil Co., Tulsa, Okla.	322	65
Swensondale Oil Co., Caddo	18,648	35,50
Swicegood, F. L., Trustee, Eastland	226	45
Talley, Oscar, Burkburnett	230	44
Taylor Sibley Syndicate, Dallas	2,239	4,674
Tannehill, L. B., Albany	5,229	9,134
Tatum Lease Syndicate, Detroit, Mich.	624	1,120
Texas Plains Syndicate, Chicago, Ill.	388	730
The Texas Company, Houston	2,430,441	4,183,183
Texas-Pacific Coal & Oil Co., Thurber	214,940	442,949
Texhoma Oil & Refg. Co., Wichita Falls	478,146	964,491
Texas Petroleum Devp. Co., Cameron	11,447	23,511
Texokan Producing Co., Coffeyville, Kans.	8,595	17,621
Texas Oil Production Co., Dallas	247	372
Texas Consolidated Oil Co., San Francisco, Calif.	3,658	6,775
Texas Fidelity Oil Corp., Louisville, Ky.	19,712	42,799
Texas Standard Oil Co., Houston	1,439	2,747
Texas Buffalo Oil Co., San Antonio	780	1,198
Texas Southern Oil & Devp. Co., San Antonio	2,465	4,025
Texas Oil Corp., Dallas	239	433
Texas Developing Co., Eastland	1,808	2,605
Texas Exploration Co., Houston	13,096	18,073
Texo Oil Co., Laredo	5,411	5,411
Texon Oil Land Co., of Texas, Big Lake	736	1,423
Teatsorth, L., et al, Eastland	11,213	23,377
Texas Unity Oil Co., Dallas	42,437	89,709
Thomas, H. J., Somerset	364	615
Thaxton, W. H., Austin	313	521
Thompson Oil Corp., Ranger	6,524	14,642
Thies Oil Co., Sour Lake	3,110	4,665
Thompson & McKinnis, Ranger	1,506	3,162
Thomas, Mack, Wichita Falls	145	264
Thall Oil Co., Beaumont	8,778	17,165
Thompson, J. L., Trustee, Ranger	5,576	11,750
Thompson, E. M. Trustee, Denver, Colorado.	5,399	12,706
Thebedeaux, D. L., Batson	458	688
Tidal Oil Co., Tulsa, Okla.	167,522	316,617
Tidal Osage Oil Co., Tulsa, Okla.	1,964	3,505
Timblin, W. E., Wichita Falls	185	404
Tillery, L. J. Oil Co., Beaumont	3,680	5,368
Tidwell, R. V., Trustee, Kissinger Lease, Graham	1,556	2,951
Tidwell, R. V., Trustee, Hughes Lease, Graham	935	1,948
Tidwell, R. V., Trustee, Castello Lease, Graham	1,087	2,180
Tidwell, R. V., Tr., Bower Lease, Graham	1,449	2,883
Tidwell, R. V., Tr., Mahaney Lease, Graham	4,839	9,944
Trinity Production Co., Dallas	918	1,913
Tripplehorn, J. W. and Dr., Ft. Worth	2,378	4,732
Triangle Oil Co., Wichita Falls	1,073	2,465
Transcontinental Oil Co., Pittsburgh, Pa.	10,158	19,259
Trans-Bay Oil Co., Galveston	90	108
Trinity Royalties Co., Denver, Colo.	825	1,662
Trio Production Co., Olney	70,826	145,203
Trimount Petroleum Co., Boston, Mass.	8,974	18,122
Tulsa Company, Wichita Falls	3,675	7,641
Tucker & Fox, Dallas	18,068	34,206
Tucker, C. A., Dallas	8,702	16,368
Tucker & Langford, Wichita Falls	62,568	122,624
Two Republic Oil & Gas Co., Laredo	9,408	9,619
Tyson Oil Co., Sour Lake	927	1,391
Unity Oil Co., Beaumont	13,161	20,663
United Production Co., Inc., Wichita, Falls	4,293	9,016
United North & South Oil Co., Luling	1,451,897	1,714,025
United Oil & Fuel Co., Philadelphia, Pa.	1,409	2,114
Underwood Drilling Co., Wichita Falls	7,476	15,923
Uncle Tom Oil Co., Minerva	9,015	18,795
Upham Gas Co., Mineral Wells	1,750	4,435
U. S. Texas Oil Corp., Dallas	11,865	21,939
Val Verde Oil Co., Del Rio	2,973	4,599
Vacuum Oil Co., Houston	64,447	96,671
Valley Oil Co., Wichita Falls	3,174	6,323
Virginia Oil Ass'n Co., Ft. Worth	3,468	7,462
Wallace, Chas. Wm., and Wife, Wichita Falls	58,774	120,785
Walker, B. S., Breckenridge	2,811	5,305
Walker Cladwell Prod. Co., Breckenridge	10,168	19,503
Waggoner, R. M., special, Wichita Falls	4,298	9,186
Watkins, J. A., Wichita Falls	697	1,399
Ward, Mrs. Fay R., Dallas	130	212
Walker, A. S., et al, Wichita Falls	7,021	14,744
Waite Phillips Co., Tulsa, Okla.	145,686	287,232
Watson, M. R., Ft. Worth	2,000	2,500
Wakefield, M. E., et al, Cross Plains	1,275	1,683
Walker, Sammel & Stewart, Breckenridge	2,171	4,493

Name— Address	Barrels	Gross Value
Warren, L. A., Cisco	1,895	3,463
Warren, Jesse R., Wichita Falls	1,835	3,394
Watters Oil Co., St. Louis, Mo.	364	546
Webb Oil Co., Humble	3,588	5,379
West Production Co., Houston	5,494	8,241
Weber Howard, Trustee, Bartlesville, Okla.	10,678	19,900
Western Oil Fields Corp., Denver, Colo.	77,553	138,196
Welborn Oil Co., Saratoga	9,802	10,922
Welles, W. G., Trustee, Nacogdoches	546	1,092
Western Oil Corp., Tulsa, Okla.	2,177	4,723
Westervelt Noble, et al, Okla. City Okla.	5,804	11,580
Westheimer & Daube, Ardmore, Okla.	1,267	2,286
Weisman, S., McKinney	79	172
West, Bessie M., Houston	3,204	4,806
Weaver Oil Corp., Eastland	479	1,069
West, J. F., Cisco	4,289	8,207
Weaver & Pois, Wichita Falls	19,772	38,555
Weiler, J. G., Cross Plains	13,709	29,090
Weed-Gayle Oil Co., Beaumont	2,065	3,098
Why Not Oil Co., Mexia	46,923	97,998
White Eagle Oil & Refg. Co., Kansas City, Mo.	6,053	12,931
White, P. J., Wichita Falls	23,895	53,801
Whitehill, B. P., Tulsa, Okla.	6,319	13,265
Wheelock & Collins, Corsicana	75,348	146,930
Wherry & Rambo, Beaumont	771	1,156
Wherry & Langhman, Beaumont	204	306
Whaley Mineral & Realty Trust, Ft. Worth	5,626	13,019
White, Jas. H., Wichita Falls	4,628	9,422
Wichita Oil Co., Wichita Falls	939	4,057
Wickett, F. H., Shreveport, La.	3,364	3,940
Witcher & Michel, Wichita Falls	439	949
Wicher, W. C., Wichita Falls	3,740	9,010
Witherspoon Oil Co., San Antonio	142,701	269,832
Wilson Broach Co., Beaumont	16,035	24,052
Williams & Hoffmeir, Dallas	4,644	9,085
Wichita Petroleum Co., Tulsa, Okla.	5,716	11,651
Wilson King, et al, Wichita Falls	22	44
Williams Burt, Wichita Falls	1,936	3,642
Wilson Drilling Co., Wichita Falls	20,616	44,558
Winnipeg Oil Co., Wichita Falls	42,163	82,856
Wise & Jackson, Supulpa, Okla.	4,910	9,626
Wittmer Property Trustee, Pittsburgh, Pa.	11,287	18,884
Wilson Lee, Wichita Falls	497	958
Wichita Production Co., Wichita Falls	16,938	36,189
Wilcox, H. F., Tulsa, Okla.	6,164	6,164
Winefree Oil Co., The, Liberty	2,094	3,141
Wonder Oil Co., Inc., Houston	452	678
Woodburn Oil Corp., Dallas	31,119	64,952
Wolf, A. T., and Son, Wichita Falls	1,132	2,286
Woods-Bennett, Wichita Falls	6,482	9,713
Wyatt Oil Co., Sour Lake	963	1,649
Yount Lee Oil Co., Beaumont	139,215	204,672
Zadie Belle Oil Co., Mineral Wells	797	1,938
Gutzler, W. F., Wichita Falls	229	423
Chico Pool Oil Co., Chico, Calif.	739	760
Shaffner-Wilson, et al, Cross Plains	18,455	41,023
Southern Exploration Co., Houston	9,491	16,016
O'Neil, John, Wichita Falls	23,702	48,576
Booher Oil Corp., Waco	20	28
Muse & Robertson, Wichita Falls	14,071	29,677
The Mexican Oil Co., Laredo	784	784
South Vernon Oil Co., Vernon	3,727	7,483
Kemp & Underwood, Cameron	235	474
Cohen & Lebow Trust, Wichita Falls	2,847	5,954
Van Cleave Trust, Wichita Falls	1,803	1,803
Emlet, L. M., St. Louis, Mo.	816	1,346
Stedham & Thrasher, Electra	92	186
The Gordon Oil Co., of Texas, Logan, Ohio	118	231
Pace & Ward, Breckenridge	3,895	4,502
Raney, R. W., Breckenridge	862	1,646
Adamson Oil & Gas Co., Mexia	646	1,079
Sheldon, W. J., Electra	11,559	24,621
West, J. F., Cisco	1,162	2,251
Texota Petroleum Co., Electra	640	1,406
Grisham Cora Lease, Wichita Falls	1,031	2,196
Stratton Ridge Oil Co., Freeport	96	144
Haynes, J. H., DeLeon	1,190	2,128
Wilson, W. M., Corsicana	3,948	6,343
Lebow, M., and Simon, Tulsa, Okla.	3,715	6,664
New England Texas Oil & Refg. Co., Easthampton, Mass.	66	87
Janellen Oil Co., Tulsa, Okla.	132	151
Weller, J. S., Oil City, La.	127	248
Eagle Creek Oil Co., San Francisco, Calif.	938	1,893
Worth Oil Co., Wichita Falls	190	380
Lain Oil Co., San Antonio	1,800	2,591
Ohio-Somerset Oil Co., San Antonio	2,166	2,729
Corsicana Oil & Refg. Co., Corsicana	7,627	7,852
Unice, Chas. J., Houston	1,802	2,343
East Batson Oil Co., Batson	12,791	18,187

Eclipse Save-A-Line

One Coat Protects with a Thick Heavy Film

ECLIPSE Save-A-Line insures your pipe lines against corrosion. Test after test by our Research Department and years of actual usage by the leading pipe line companies under all conditions of soil, moisture and climate have proved that ECLIPSE Save-A-Line leads in—

1. Effective and long lived protection
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3. Moderate cost
4. Resistance to the passage of moisture, air and electric currents.

Eclipse SAVE-A-LINE is made in black only. It requires no stirring or heating and can be applied just as it comes from the package. This eliminates fire hazard and also possible injury to the workmen who handle hot materials. It covers approximately 140 square feet to the gallon, with an exceptionally thick film, four to five times thicker than ordinary paint. Only one application is necessary.

We are confident it will be a lasting and profitable investment for you. A small trial order will prove it.

The Eclipse Paint & Mfg. Co.
Cleveland, Ohio, U.S.A.

Dallas Detroit Philadelphia San Francisco
Denver Newark Pittsburgh Charlotte, N. C.

SQUEAKS FROM THE BULL WHEEL

At a filling station along one of the lower California highways a large Locomobile car drove up and the driver asked: "How far to Santa Anna?" The attendant answered, "One hundred and ten miles."

"Put in ten gallons of gas and a quart of oil," said the driver.

Next car was a Cadillac and the same conversation took place. He wanted twenty gallons of gas and two quarts of oil. Next car was a Pierce-Arrow. Same conversation, only driver wanted twenty-five gallons of gas and four quarts of oil.

The next car was a Ford. The driver hopped out, asked the same question, received the same answer, and said: "All right. Give me a pack of Camels, fill her up with water, and hold 'er till I get in."

"There was a young girl from
Siam,
Who had a rough lover named
Priam
'I don't want to be kissed,
But if you insist
God knows you are stronger
than I am.'"

"Stop, look, listen!"

The reflective man stopped to read the railway warning.

"Those three words illustrate the whole scheme of life," said he.

"How?"

"You see a pretty girl; you stop; you look; after you marry her you listen."

They met on the bridge at midnight,
They will never meet again
For one was an eastbound heifer,
And the other a westbound train.

"Have you any rubber articles?" asked the man entering the store.

"Surely," replied the salesman. "We have a fine line of opera glasses."

She (at expensive resort): "How the tide comes in with its long green roll."

He: "I suppose it realizes that there's no use coming here without one."

"So your boy became a doctor after he left college. Where is he now?"

"Living out in the country."

"Doing well?"

"I guess so. He wrote last week that he had cured some hams and some hay."

"Save me a sample of everything the patient takes," directed the young doctor.

"He took a kiss this morning," faltered the pretty nurse.

Briggs: Robinson wants to borrow $50 from me. Is he good for that amount?

Miggs: Yes, with proper securities.

The African Baptist Church was making a drive for funds and two colored sisters were bearing down hard on Uncle Rastus—

"I can't give nothin'," exclaimed the old darky. "I owes nearly everybody in this here old town already."

"But," said one of the collectors, "don't you think you owe the Lord something, too?"

"I does sister, indeed," said the old man; "but he ain't pushing me like the other creditors is."

The House Agent—"You say you have no children, gramophone or wireless, and you don't keep a dog. You seem just the quiet tenant the owner insists on."

The House Hunter—" I don't want to hide anything about my behavior, so you might tell the owner that my fountain pen squeaks a bit."

—The Bystander.

Farmer (showing friend over the farm): How many sheep would you guess were in that flock?

Visitor (considers a moment, and ventures): About five hundred.

"Absolutely correct! How did you guess it?"

"Waal, I jest counted the legs and divided the number by four."

Your account, sir, has been running a long time, Mr. Jinks.

Exactly, it must be very tired. Let it stand still for a few months.

I hear your brother has the hay fever pretty badly," said one man to another.

"He has. He even sneezes every time he passes a grass widow."

"What did you talk about at the last medical meeting?"

"Nitrates."

"Well, they ought to be higher. It's worth something to leave a warm bed."

Judge: Pat, why did you hit this man with a brick?

Pat: Well, yer honor, I was just throwing him a hint.

A hint of what?

Just a hint of how much I disliked him, sor.

"I see this medicine is good for man or beast."

"Yes," said the druggist.

"Gimme a bottle. I believe that is the right combination to help my husband."

"Ah," he exclaimed, as he pressed her tenderly to him at parting, "shall I hold you in these arms again tomorrow, and paint our future with bright pigments of the imagination?"

"No," she said calmly, "not tomorrow; tomorrow's wash day."

Customer—"I want to try that chemise on in the window."

Flustered Clerk —"Whyer—thank you for your kind offer, madam, but we are very well suited with the display we already have."

—American Legion Weekly.

"Ah's gwine to go to de pahty t'night, but fust Ah's gotta go home an' change mah clothes."

"Change yo' clothes? Boy, when yo' buttons yo' coat, you' trunk am locked!"

"You say the patient died. Did you give him my medicine as directed?"

"Yes, doctor; you said to give it to him only when awake, and I was only awake once since you left."

"Now, Johnny," asked the teacher, "what do we see in the country besides grass, trees and flowers?"

"Patent medicine signs."

Wheels that stay NEW

THE use of Moore Steel Bull, Band and Calf Wheels has expanded by leaps and bounds. For Several years, our shops were unable to keep up with the demand. Since the recent completion of a large new plant at Pittsburgh, our production and shipments have been more than doubled. To us these simple facts seem to be the best possible evidence of the universal satisfaction given by Moore Wheels in particular, and of the economy of steel versus wood wheels in general. For the heaviest service and longest life, there is nothing like a Moore Steel Wheel.

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Band Wheels
Calf Wheels
Steel Tug Rims

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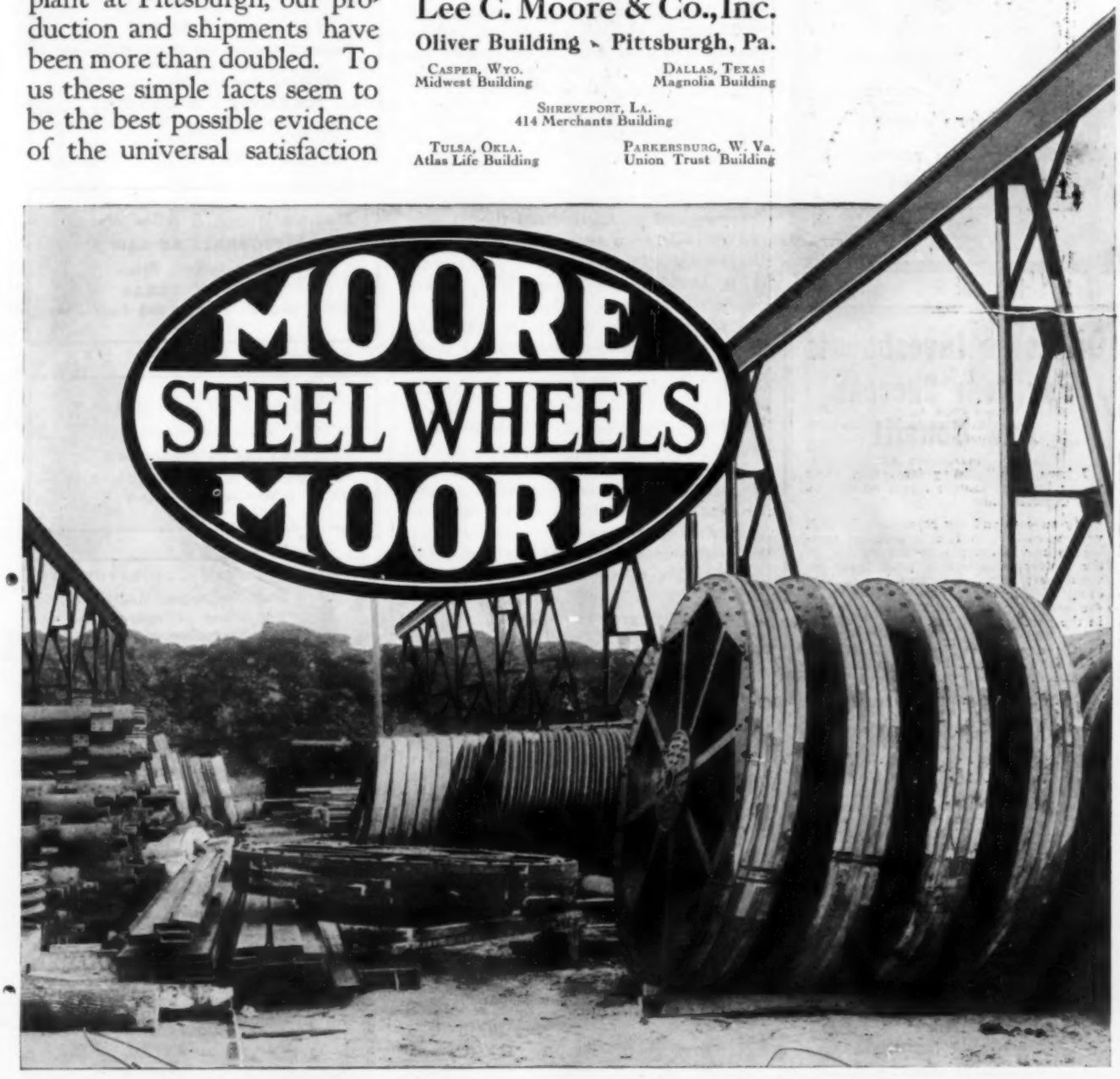

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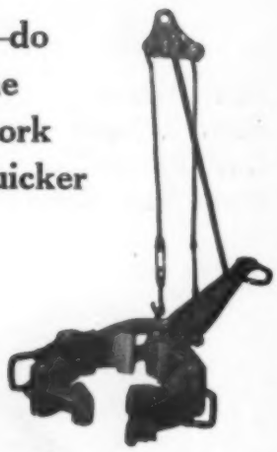
It's a Wilson

Wilson

2-step, spring-latch

Tongs

—do the work quicker



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I have been building for many, many years; building for the future on success and experience.

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My organization today is stronger than ever before; stronger today than yesterday; stronger tomorrow than today.

This is for your benefit—for the benefit of yourself and your friends; for the benefit of those who are my friends and clients; and for the benefit of those additional ones whom I would like to give REAL WORTHWHILE OPPORTUNITIES AND SERVICE in these matters; for their investments and success.

MY NEW MAPS of Crockett County vicinity are FREE TO YOU FOR THE ASKING.

C. W. WEBSTER
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Fort Worth, Texas

Reference:
Mercantile Agencies

Union Oil Company Directors And Officers All Re-Elected

Los Angeles, Calif.—All directors of both the Union Oil Company of California and the Union Oil Associates were re-elected at the annual general meetings of these concerns February 23 and at the subsequent meetings of the directors, the officers also were re-elected.

Considerable satisfaction was evinced over the prosperous condition of the company at the annual meeting of the Union Oil Company of California stockholders, presided over by President W. L. Stewart, who briefly outlined the affairs of the company.

E. W. Clark, executive vice-president, told the stockholders about the company's operations in Colorado and Colombia, S. A. In Colorado, in the Fort Collins-Wellington area, Mr. Clark stated, the Union was now getting daily production of approximately 2900 barrels of high gravity oil, and he anticipated that a substantial increase in production from this area might be expected within the next year.

Dealing with the company's immense holdings in Colombia, S. A., which are in excess of 425,000 acres, Mr. Clark informed his hearers that this property is now being surveyed by company engineers and geologists and that it may be considered a reserve against future demands.

R. D. Matthews, comptroller, gave a very illuminative talk on the company's refining operations, in which he sketched the tremendous strides made by the company. As an instance he told the stockholders that whereas the company was producing approximately 25 million gallons of refined products in 1915, today the production was in the neighborhood of 300 millions. Mr. Matthews also mentioned that it was expected to introduce new features in refining which would substantially increase the production of refined products in the near future.

Directors who will serve for the ensuing year are as follows: W. L. Stewart, E. W. Clark, W. W. Orcutt, L. P. St. Clair, R. D. Matthews, R. J. Keown, C. W. Brown, P. N. Boggs, C. W. Ralph, A. B. Macbeth, W. R. Staats, F. C. Bolt, A. P. Johnson, Gurney Newlin, Henry M. Robinson, I. B. Newton, E. J. Bermingham, Jas. A. Brady, George W. Davison and Clarence Dillon.

Preceding the Union Oil meeting, stockholders of the Union Oil Associates, holding company, held their annual gathering. The board of directors of last year was re-elected and stands as follows:

Dr. M. N. Avery, Frank C. Bolt, E. W. Clark, Shannon Crandall, George I. Cochran, Fillmore Condit, Paul M. Gregg, A. P. Johnson, J. S. Macdonnell, Lee Millbank, Stanley Morshead, I. B. Newton, W. W. Orcutt, E. F. Powers, Henry M. Robinson, W. L. Stewart,

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Washington, D. C.

The Leonard Combination Casing and Tubing Spear

use as a

TRIP OR BULLDOG

SLIPS are tapered so that they cannot split as do old-style spears.

TRIP is so made as to permit spear to be driven down several times before it finally trips. Can be set just as the operator likes.

SPEAR now being made for use in 2, 2½, 3-inch tubing.

LARGER sizes now being made and will be ready for the market shortly.

COLLAR on the LEONARD COMBINATION SPEAR is threaded for a guide and bowl to guide the tubing into the spear.

Fully Patented

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United States Patent Office
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William R. Staats, L. P. St. Clair, J. C. Warren, Dwight Whiting. The following officers of the Associates were chosen: Henry M. Robinson, president; Dwight Whiting, I. B. Newton and Stanley Morshead, vice-presidents; Lee B. Millbank, secretary.

Officers of the Union Oil Company were re-elected as follows: W. L. Stewart, president; E. W. Clark, executive vice-president; W. W. Orcutt, L. P. St. Clair, vice-presidents; R. D. Matthews, comptroller; R. S. Mill and George H. Forster, assistant comptrollers; John McPeak, secretary; W. L. Edwards, assistant secretary; R. J. Keown, treasurer and J. M. Rust, assistant treasurer.

Slight Cut in Funds for Petroleum Investigations

Washington, D. C.—Slight decreases are made in the appropriations to be given the Bureau of Mines during the fiscal year beginning July 1, next, for its petroleum and oil shale investigations, it is shown by the appropriation bill for the Department of Commerce as reported to the House by the appropriations committee on February 26.

The sum of $211,000 is given for petroleum and natural gas investigations, a reduction of $2330 from this year's allotment, and $89,000 is provided for oil shale investigations, a decrease of $150.

These slight reductions will in no way interfere with the bureau's work. The changes grew out of the separation of the bureau from the Interior Department and its attachment to the Department of Commerce a few months ago, at which time an effort was made to segregate the funds for work to be taken over by the Department of Commerce from those to be used for activities retained for the Interior Department.

Banquet of California Chamber of Mines and Oil April 7

Los Angeles, Calif.—The annual banquet of the California Chamber of Mines and Oil will be held in the Fiesta room of the Ambassador hotel, Los Angeles, the evening of April 7.

Details of entertainment are in the hands of the Wildcats, an organization of California oil men which was responsible last fall for the most successful luncheon ever held by the Chamber members.

Preparations are being made to entertain 1000 members, and seats for this year's banquet will be allotted only by special reservation. Blanks for this purpose shortly will be mailed to all members.

OIL WELL ALCO TOOLS

Perfection Drill Pipe Float Valve

Relieves excessive strain on derrick, draw works, hoist mechanism and wire lines, when running long strings serves to semi-float pipe down the hole. Placed at point in string where it will give required relief. Simple and efficient. Low in cost. Made with rotary tool joint connection.

Has no obstruction, allowing clear flow of rotary mud or fluid. Has no springs or other delicate mechanism to get out of order. Valve hangs closed through proper construction and scientific adjustment of supporting pins.

Phantom view of Perfection Drill Pipe Float Valve

Allen & Courtney Oil Tool Co.

Cor. South Park and Main Sts. Box 1188.
Telephone Gardena 723, Compton, California.

Deep Test Well Now Drilling in North Florida

T. F. Bray and associates from Arkansas are now drilling a deep test well for oil and gas located on the Monticel'o dome in Jefferson County, Florida. Send for structural and drainage map, also Geological report. Geology by Dr. S. T. Wisby of Little Rock, Arkansas. We desire to hear from all of those who are interested in purchasing leases and royalties around this well.

T. F. Bray, Trustee
Box 127
Monticello, Fla.

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Boiler Tubes

Charcoal Iron
for bad water conditions—

Lapweld Steel
for good water conditions—

For long tube life.

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UNDER REAMER BODY AND CUTTER STEEL, CAPPING and BOX and PIN STEEL and OTHER SPECIAL STEELS.

Oil Well Tools Made of ASCO Steel Reduce Delays

Frequent pulling and dressing of bits increase costs of drilling. Bits made from Asco Steel last much longer than bits made of other steel. Our staff of metallurgists will assist you in solving your problems. No charge.

"The recollection of quality remains long after price is forgotten"

The Andrews Steel Co.
NEWPORT, KY.

ASCO Steel for Oil Well Tools

Tribal Osage Oil Leases At Public Auction

March 17 and 18, 1926 By U. S. Government

March 17 and 18, 1926, at Pawhuska, Oklahoma, about 115,000 acres will be offered for oil leases in quarter section tracts. Bids will be for bonus in addition to royalties, 25% payable on day of sale, balance in three annual instalments, with acceptable security. Within advertised area there are about 9479 oil wells producing from one barrel to 1200 barrels each, the total daily production for December, 1925, being about 70,000 barrels; also, there are about 80 wells drilling. All lands are now leased separately for gas. Blue print maps of area advertised, showing tracts producing oil or gas, can be had for fifty cents each, also logs of producing oil or gas wells for twenty-five cents each well. Write U. S. Superintendent, Osage Agency, Pawhuska, Oklahoma, for maps, logs or other information.

Figure *low* on pipe and casing!

Save a big percentage by using our guaranteed casing in all sizes, warranted new in grade and workmanship of threads, collars and protectors. Our prices show you a big saving.

New and used pipe in all sizes, rigidly inspected and fitted with new threads and couplings. All guaranteed in first class order. Ready for shipment now. Get our quotations.

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GUIDE FOR PURCHASERS

A classified directory of all products used in the production of oil together with names of recognized supply dealers and manufacturers from whom they may be purchased. The concerns appearing in the Guide are regular advertisers in The OIL WEEKLY and further information including addresses can be secured by referring to their advertisements. Alphabetical Advertisers Index on page 22.

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See Oil Field Supplies and Tanks

Boiler Mountings—
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Core Drills—
Allen & Courtney Oil Tool Co.
O. M. Carter
Elliott Core Drilling Co.
H. C. Smith Mfg. Co.
Spengler Core Drilling Co.

Compressors—
Butler Mfg. Co.
Gardner Governor Co.
Hope Engineering & Supply Co.
Sullivan Machinery Co.
United Iron Works, Inc.

Cordage—
Continental Supply Company
The Longhart Supply Company
The National Supply Cos.
Republic Supply Co.

Crown Blocks—
Baash-Ross Tool Co.
Continental Supply Company
International Derrick & Equipment Co.
Lufkin Foundry & Machine Co.
Oil Well Supply Co.
Parkersburg Rig & Reel Co.

Couplings—
Harrisburg Pipe & Pipe Bending Co.
Superior Tube Company

Cocks, Drain—
The Lunkenheimer Company

Dehydrating Processes—
Wm. S. Barnickel Co.
Petroleum Rectifying Co.

Derricks and Rigs—
International Derrick & Equipment Co.
Lee C. Moore & Co., Inc.
National Turnbuckle Derrick Co.
Parkersburg Rig & Reel Co.
Peden Iron & Steel Co.
Robertson-McDonald Lumber Co.
Superior Tube Company

Diamond, Black—
R. S. Patrick
Sullivan Machinery Co.

Diamond Core Drills—
R. S. Patrick
Sullivan Machinery Co.

Diamond Drilling Carbon—
R. S. Patrick

Diesel Engines—
Busch-Sulzer Bros. Diesel Engine Co.
McIntosh & Seymour Corp.

Ditchers—
Buckeye Traction Ditcher Co.

Draw Works—
Emsco Derrick & Equipment Co.
Lufkin Foundry & Machine Co.

Drilling Cables—
American Cable Co.
Bridgeport Machine Co.
Continental Supply Company
Frick-Reid Supply Co.
The National Supply Cos.
Peden Iron & Steel Co.
Regan Forge & Engineering Co.
Republic Supply Co.
Star Drilling Machine Co.
Wickwire Spencer Steel Corp.

Drill Pipe Slips—
Baash-Ross Tool Co.

Drilling Machines—
Bridgeport Machine Co.
Clark Machine Company
Continental Supply Company
Parkersburg Rig & Reel Co.
Star Drilling Machine Co.

Drill Collars—
Baash-Ross Tool Co.
Continental Supply Company
Federal Supply Co.

Drill Pipe Cutting—
Baash-Ross Tool Co.
Houston Engineers, Inc.

Drilling Tools—
Acme Fishing Tool Co.
Baash-Ross Tool Co.
Continental Supply Company

Drilling, Diamonds for—
R. S. Patrick

Drill Pipe—
Continental Supply Company
Frick-Reid Supply Co.
National Tube Co.
Peden Iron & Steel Company
Republic Supply Co.
Reading Iron Co.
South Chester Tube Company

Drilling Equipment—
Baash-Ross Tool Co.
Bridgeport Machine Co.
Hercules Supply Co.
Republic Supply Co.
Star Drilling Machine Co.
Superior Tube Co.

Drive Pipe—
Continental Supply Company
Republic Supply Co.
Reading Iron Co.
Superior Tube Company

Electrical Equipment—
General Electric Co.
Westinghouse Elec. & Mfg. Co.

Elevators—
Bridgeport Machine Co.
The Cunningham Co.
Dunn Mfg. Co.
LeBus Rotary Tool Works
Wilson & Willard Mfg. Co.

Electric Equipment—
General Electric Co.

Engines, Diesel—
Western Machinery Co.

Engines, Gas—
Bruce-Macbeth Engine Co.
Climax Engineering Co.
Frick-Reid Supply Co.
Hope Engineering & Supply Co.
Spence Machine Co.
The Pattin Bros. Co.
Waukesha Motor Company
Western Machinery Co.

Engines, (Gasoline or Kerosene)—
Climax Engineering Co.
Continental Supply Company
Waukesha Motor Co.

Engines, Oil—
Frick-Reid Supply Co.
The Pattin Bros. Co.
Western Machinery Co.

Engines, Pumping—
Ajax Iron Works
Bessemer Gas Engine Co.
Bridgeport Machine Co.
Climax Engineering Co.
Continental Supply Company
The Brownell Co.
De La Vergne Machine Co.
Franklin Valveless Engine Co.
Frick-Reid Supply Co.
Hope Engineering Co.
Lucey Mfg. Corp.
Lufkin Foundry & Machine Co.
The National Supply Cos.
National Transit Pump & Machine Co.
Oil Well Supply Co.
Peden Iron & Steel Co.
Republic Supply Co.
Rock Island Plow Co.
Spence Machine Co.
Southern Engine & Pump Co.
Titusville Iron Works
Waukesha Motor Company
Western Machinery Co.

Engineers—
Hope Engineering & Supply Co.
Lee C. Moore & Co.
D. T. Ring

Fire Protection—
Oil Conservation Engineering Co.

Fire Snuffers—
Simplex Equipment Company

Fish Tail Bits—
Continental Supply Company
Frick-Reid Supply Co.
Federal Supply Co.
Lucey Mfg. Corp.
Pelican Well Tool & Supply Co.
Regan Forge & Engineering Co.

Filters, Gas—
Metric Metal Works

Fishing and Drilling Tools—
Federal Supply Co.

Floor Circle Braces—
Dunn Mfg. Co.

Fuel Oil—
Gulf Refining Co.
Sinclair Refining Co.

Gasoline Extraction Compressors—
Continental Supply Co.
Bessemer Gas Engine Co.
Hope Engineering & Supply Co.
Sullivan Machinery Co.

Gauge Cocks—
The Lunkenheimer Company

Gauge Hatches—
General Machine Works
Oil Conservation Engineering Co.
Westcott & Greis

Gauges—
Oil Conservation Engineering Co.
Metric Metal Works
Westcott & Greis

Gas Engines—
C. F. Camp Co.
Emsco Derrick & Equipment Co.
S. M. Jones Co.
Joseph Reid Gas Engine Co.
Waukesha Motor Co.

Gas Generators—
Baird Supply Co.

Gas Lift System—
Jones-McLaughlin Co.

Gas Traps—
American Tank Co.
Lorraine Corp.
Smith Separator Co.
Trumble Gas Trap Co.

Gasoline and Oil Storage Tanks—
Butler Mfg. Co.
Kansas City Struct. Steel Co.

Genuine Wrought Iron Casing—
Reading Iron Co.

Geologists—
Edwin B. Hopkins
Armstrong, Price W.

Governors—
Gardner Governor Co.

Grips and Clamps—
J. P. Ratigan
Sargent Engineering Corp.

Heat Exchangers—
Brown Welding & Machine Co.
Hope Engineering & Supply Co.

Hoists—
Emsco Steel Products Co.

Hose—
Continental Supply Company
Peden Iron & Steel Company

Houses—
Crain Ready-Cut House Co.

Iron Casing—
Superior Tube Company
South Chester Tube Company

Jars—
Spang & Co.

Joint Collars—
Federal Supply Co.

Laboratory Equipment—
Fort Worth Laboratories

Lapwelded Steel Boiler Tubes—
The Tyler Tube & Pipe Co.

Lead in Oil—
Eagle Picher Lead Co.

Lead Wool and Containers—
Eagle Picher Lead Co.

Lighting Systems—
Bridgeport Machine Co.
General Electric Company
Westinghouse Elec. & Mfg. Co.

Line Pipe—
Continental Supply Company
Peden Iron & Steel Company
Republic Supply Co.
Reading Iron Co.

Litharge—
Eagle Picher Lead Company

Lumber—
Robertson-McDonald Lumber Co.

Lubricators—
The Lunkenheimer Company
Manzel Bros. Co.

Maps—
Heydrick Mapping Co.

Meters—
Continental Supply Company
Metric Metal Works
Westcott & Greis

Meters, Drilling Well—
Metric Metal Works

Meters, Orifice—
Metric Metal Works

Meters, Provers—
Metric Metal Works

Motors—
General Electric Co.
Westinghouse Elec. & Mfg. Co.

Oiling Devices—
The Lunkenheimer Company

Oil Field Supplies—
Butler Mfg. Co.
Bridgeport Machine Co.
Continental Supply Company
The Cunningham Co.
Federal Supply Company
C. C. Fetty
Frick-Reid Supply Co.
Erle P. Halliburton
Hercules Supply Co.
International Supply Co.
Jarecki Mfg. Company
Lee C. Moore & Co.
Lucey Mfg. Corp.
The Lunkenheimer Company
The National Supply Cos.
Oil Well Supply Co.
Peden Iron & Steel Company
Petroleum Iron Works Co., The
Republic Supply Co.
Regan Forge & Engineering Co.
Smith Separator Co.
Southern Brass Mfg. & Plating Company
United Iron Works, Inc.
J. H. Williams & Co.
Wilson & Willard Mfg. Co.

Oil and Gas Packing and Insulations—
Johns-Manville, Inc.

Oil Well Casing—
Continental Supply Company
Frick-Reid Supply Company
Republic Supply Company

Oil Well Cementing—
Erle P. Halliburton
Oklahoma Portland Cement Co.

Oil Well Reamers—
Jones Oil Well Reamer Co.

Oil Well Shooting—
Eastern Torpedo Company
U. S. Torpedo Co.
Zero Hour Torpedo Co.

Overshots—
Baash-Ross Tool Co.
Continental Supply Company
LeBus Rotary Tool Works
Regan Forge & Engineering Co.

Packers—
The Guiberson Corp.
Larkin & Co.
Layne & Bowler
Regan Forge & Engineering Co.

Packing—
Continental Supply Company
Frick-Reid Supply Co.
The National Supply Cos.
Peden Iron & Steel Company
Republic Supply Co.

Paints—
Continental Supply Company
Eclipse Paint & Mfg. Co.
Peden Iron & Steel Co.
Sullivan Company
Tnemec Paint & Oil Co.

Panel Boards—
General Electric Co.
Westinghouse Elec. & Mfg. Co.

Patents—
Hardway & Cathey
Lancaster & Allwine
Jesse R. Stone

Perforated Casing—
Kobe, Inc.

Pipe—
Central Tube Co.
Continental Supply Company
Frick-Reid Supply Co.
Harrisburg Pipe & Pipe Bending Co.
Hercules Supply Co.
International Supply Co.
National Tube Co.
The National Supply Cos.
Oil Well Supply Co.
Peden Iron & Steel Company
Reading Iron Co.
Republic Supply Co.
South Chester Tube Company
Youngstown Sheet & Tube Co.
Wilson & Willard Mfg. Co.

Pipe Cleaning Machines—
W-K-M Company

Pipe Screwnig Machines—
Buckeye Traction Ditcher Co.

Pipe Threading Machines—
Jarecki Mfg. Company
Landis Machine Co.
Williams Tool Corporation

Pipe Vises—
J. H. Williams & Co.

Pipe Wrenches—
Dunn Mfg. Co.
The Guiberson Corp.
LeBus Rotary Tool Works
Republic Supply Co.
J. H. Williams & Co.
Wickwire Spencer Steel Corp.

Plumb Bobs and Seats—
Sargent Engineering Corp.

Portable Buildings—
Butler Manufacturing Co.
International Derrick & Equipment Co.

Portable Drilling Rigs—
Bridgeport Machinery Co.
Continental Supply Company
Lee C Moore & Co., Inc.
Parkersburg Rig & Reel Co.
Star Drilling Machine Co.
The National Supply Cos.
Waukesha Motor Company

Portable Compressors—
Sullivan Machinery Co.

Provers—
Metric Metal Works

Pulleys—
Continental Supply Company
International Derrick & Equipment Co.
Lee C. Moore & Co., Inc.

Pulling Machines—
Clark Machine Co.
Continental Supply Company
Iron King Mfg. Co.

Pumps—
Axelson Machine Co.
Continental Supply Company
D & B Pump & Supply Co.
C. C. Fetty
Frick-Reid Supply Co.
Gardner Governor Co.
Gaso Pump & Burner Mfg. Co.
Goulds Manufacturing Co.
Jarecki Manufacturing Co.
Lucey Manufacturing Corp.
National Transit Pump & Machine Co.
Northrup Equipment Company
Oil Well Supply Co.
Peden Iron & Steel Company
Republic Supply Co.
Southern Engine & Pump Co.
United Iron Works, Inc.
Waukesha Motor Co.

Pumping Engines—
C. F. Camp Co.
McIntosh & Seymour Corp.

Pumping Equipment—
General Electric Company
Northrup Equipment Company
Shaffer Specialty Co.

Pumping Powers—
American Well Works Co.
Continental Supply Company
C. C. Fetty
Frick-Reid Supply Co.
International Supply Co.
Jarecki Mfg. Co.
Jensen Bros. Mfg. Co.
Kansas City Hay Press Mfg. Co.
Spence Machine Co.

Regulators—
Westcott & Greis

Refined Products—
Gulf Refining Co.
Humble Oil & Refining Co.
Magnolia Petroleum Co.
Sinclair Refining Co.
The Texas Co.

Recorders—
Fort Worth Laboratories

Refinery Equipment—
Butler Mfg. Co.
Continental Supply Company
Petroleum Iron Works Co., The
Republic Supply Co.
Smith Separator Co.
Titusville Iron Works
United Iron Works, Inc.
Westcott & Greis
Wyatt Metal & Boiler Works

Reverse Gears—
Emsco Derrick & Equipment Co.

Rig Irons—
International Supply Co.
Lee C. Moore & Co., Inc.
Oil Well Supply Co.
Parkersburg Rig & Reel Co.
Republic Supply Co.

Rotary Machines—
Emsco Derrick & Equipment Co.

Roofing and Shingles—Asbestos—
Johns-Manville, Inc.

Rope Socket Metal—
Eagle Picher Lead Co.

Rotaries—
International Supply Co.

Rotary Fish Tail Bits—
Continental Supply Company
Multi-Cutr Rotary Bit Co.
Pelican Well Tool & Supply Co.
Regan Forge & Engineering Co.
Republic Supply Co.

Rotary Rock Bits—
Hughes Tool Co.
Reed Roller Bit Co.

Rotary Tools—
Federal Supply Company

Safety Casing Clamps—
Shaffer Specialty Company

Sand Pumps—
Larkin & Co.

Sand Reel Supports—
Shaffer Specialty Co.

Screen Casing—
Kobe, Inc.
Wilson & Willard Mfg. Co.

Separators—
Butler Mfg. Co.
Lorraine Corp.
M & V Tank Co.
Smith Separator Co.
Trumble Gas Trap Co.

Snuffers, Fire—
Simplex Equipment Co.

Specialty Manufacturers—
Shaffer Specialty Co.

Steel, Alloy—
Andrews Steel Co.
Central Steel Co.
Ludlum Steel Co.

Steel Bull Wheels—
Emsco Derrick & Equipment Co.
McIntosh & Seymour Corp.

Steel Calf Wheels—
Emsco Derrick & Equipment Co.

Steel Derricks—
Emsco Derrick & Equipment Co.
Emsco Steel Products Co.
International Derrick & Equipment Co.
Lee C. Moore & Co., Inc.
Parkersburg Rig & Reel Co.

Steel Crown Blocks—
International Derrick & Equipment Co.
Lee C. Moore & Co., Inc.
Parkersburg Rig & Reel Co.

Steel Storage Tanks—
Butler Mfg. Co.
Petroleum Iron Works Co., The

Strainers—
Emsco Steel Products Co.
Howard Smith Company
Kobe, Inc.
Layne & Bowler Co.
J. H. McEvoy & Co.

Special Steels—
Andrews Steel Company
Central Steel Co.

Structural Steel—
Butler Mfg. Co.
United Iron Works, Inc.

Sucker Rod Lines—
Continental Supply Company

Sucker Rod Elevators—
The Cunningham Co.
Axelson Machine Co.

Sucker Rod Hangers—
Lorraine Corp.

Sucker Rod Hooks—
The Cunningham Co.
Regan Forge & Engineering Co.

Sucker Rod Rotors—
Sargent Engineering Corp.

Sucker Rod Sockets—
Baird Supply Co.
Brown Welding & Machine Co.
Continental Supply Company
The Cunningham Co.
Federal Supply Company
Shaffer Specialty Co.
Western Supply Co.

Sucker Rods—
Axelson Machine Co.
Continental Supply Company
Columbus Sucker Rod Co.
D & B Pump & Supply Co.
Dunn Mfg. Co.
Frick-Reid Supply Co.
S. M. Jones Co.
The National Supply Co.
Kansas City Bolt & Nut Co.
Oil Well Supply Co.
J. P. Ratigan
Republic Supply Co.

Swabs—
The Cunningham Co.
Shaffer Specialty Co.
Simplex Equipment Company

Swing Joints—
General Machine Works
Westcott & Greis

Tanks—
Butler Mfg. Co.
The Brownell Co.
Maloney Tank Co.
M & V Tank Co.
Petroleum Iron Works Co., The
United Iron Works
Wyatt Metal & Boiler Works

Tank Deadwood—
Robertson-McDonald Lumber Co.

Tank Equipment—
Westcott & Greis

Temper Screws—
Burns Tool Co.

Thermometers—
Fort Worth Laboratories

Timbers—
Robertson-McDonald Lumber Co.

Tongs—
Bridgeport Machine Co.
Continental Supply Company
Dunn Mfg. Co.
Guiberson Corporation
Howard Smith Company
LeBus Rotary Tool Works
J. H. Williams & Co.
Wilson & Willard Mfg. Co.

Tool Joints—
Baash-Ross Tool Co.
Bridgeport Machine Co.
Continental Supply Company
Emsco Steel Products Co.
Hughes Tool Co.
Peden Iron & Steel Company
Regan Forge & Engineering Co.
Republic Supply Co.

Tools (Fishing and Drilling)—
Acme Fishing Tool Co.
Bridgeport Machine Co.
Brown Welding & Machine Co.
Continental Supply Company
Frick-Reid Supply Co.
Houston Engineers, Inc.
Hughes Tool Co.
International Supply Co.
Oil Well Supply Co.
Peden Iron & Steel Co.
Regan Forge & Engineering Co.
Republic Supply Co.
Spang & Co.
Star Drilling Machine Co.
Sullivan Machinery Co.

Toothless Slips—
LeBus Rotary Tool Works

Tractor Winch—
C. F. Camp Co.
Rock Island Plow Co.

Traveling Blocks—
Baash-Ross Tool Co.
Continental Supply Company
Lufkin Foundry & Machine Co.
Regan Forge & Engineering Co.

Tret-O-Lite—
W. S. Barnickel & Co.

Trucks—
Wichita Falls Motor Co.

Tubing Catcher—
Dunn Mfg. Co.
Guiberson Corporation

Tubing Lines—
Continental Supply Company

Tubing Protectors—
Mexia Planing Mill Co.

Tubing—
Continental Supply Company
Central Tube Co.
National Tube Co.
Republic Supply Co.
Reading Iron Co.
South Chester Tube Company

Underreamers—
Bridgeport Machine Co.
Wilson & Willard Mfg. Co.

Vacuum Pumps—
Sullivan Machinery Co.

Valves—
Continental Supply Company
Darling Valve & Mfg. Co.
The Charles N. Hough Mfg. Co.
Ludlow Valve Mfg. Co.
The Lunkenheimer Company
Metric Metal Works
Norris Bros.
Northrup Equipment Company
Smith Separator Co.
Southern Brass Mfg. & Plating Company
Peden Iron & Steel Company
Westcott Valve Mfg. Co.

Valves, Gate—
The Lunkenheimer Company

Valves and Fittings—
Continental Supply Company
Darling Valve & Mfg. Co.
D & B Pump & Supply Co.
Hercules Supply Co.
Jarecki Mfg. Co.
Kerotest Mfg. Company
Ludlow Valve Mfg. Co.
Lufkin Foundry & Machine Co.
The Lunkenheimer Company
The National Supply Cos.
Peden Iron & Steel Company
Republic Supply Co.
United Iron Works

Vents—
Westcott & Greis
Oil Conservation Engineering Co.

Walking Beams—
International Derrick & Equipment Co.
Lee C. Moore & Co., Inc.

Well Shooters—
Eastern Torpedo of Ohio Co.

Working Barrels—
Axelson Machine Co.
Continental Supply Co.
D & B Pump & Supply Co.
Howard Smith Company
Northrup Equipment Company
Peden Iron & Steel Company
Republic Supply Co.
The Charles N. Hough Mfg. Co.
Southern Brass Mfg. & Plating Company

Water Gauges—
Metric Metal Works
J. E. Shaffer Company
Smith Separator Co.

Water Cans—
H. P. Gott Mfg. Co.

Water Softening Compounds—
Ward Chemical Co.

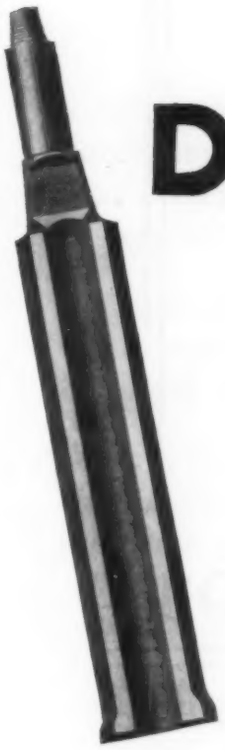
Wire Rope—
American Cable Co.
Bridgeport Machine Co.
Continental Supply Company
Hercules Supply Co.
International Supply Co.
The Longhart Supply Company
Peden Iron & Steel Company
Regan Forge & Engineering Co.
Republic Supply Co.
The National Supply Cos.
Wickwire Spencer Steel Corp.
Williamsport Wire Rope Co.

Wire Rope Fittings—
American Cable Co.

Wire Rope Slings—
American Cable Co.

IDEAL

DRILLING BITS



IDEAL DRILLING BITS
FORGED FROM IDEAL
ELECTRIC STEEL ARE
GUARANTEED AGAINST
BREAKING OR CHECKING
WHEN DRESSED AND
TEMPERED IN ACCORDANCE
WITH FURNISHED INSTRUCTIONS

THE NATIONAL SUPPLY COMPANIES

Say you saw it in The OIL WEEKLY

Gulf Refining Company

OKLAHOMA
TEXAS
LOUISIANA

Refiners of PETROLEUM

GASOLINE
REFINED OIL
NAPHTHA
GAS OILS
PARAFFINE WAX
ASPHALT
FUEL OIL
LUBRICATING OILS
CYLINDER
ENGINE
CORDAGE

Red and Pale Paraffine Oils

General Sales Offices: PITTSBURGH, PA.

District Sales Offices:
NEW YORK, HOUSTON, ATLANTA, BOSTON, NEW ORLEANS, PHILADELPHIA

Ocean Terminals

Beverly, Mass.
Gibson's Point, Pa.
Port Tampa, Fla.
Port Arthur, Texas

Bayonne, N. J.
Savannah, Ga.
Gretna, La.
Magazine Point (Mobile), Ala.

Galveston, Texas
Providence, R. I.
Jacksonville, Fla.
Charleston, S. C.

Why Not CUT Thru

Cutting and chipping; cutting and chipping—that's the principle that makes for fast hole.

Why sit on a rock for hours when a Reed will cut right through?

Keep a Reed Rock Bit on the derrick floor to cut your rock.

The cross section of the cutters, with sharp, chipping blows, doubly delivered at each rotation of the drill stem, guarantees that this bit will cut faster than any other rock tool on the market.

Reed Rock Bits

Reed Roller Bit Company

HOUSTON LOS ANGELES

Gulf Refining Company

OKLAHOMA
TEXAS
LOUISIANA

Refiners of PETROLEUM

GASOLINE
REFINED OIL
NAPHTHA
GAS OILS
PARAFFINE WAX
ASPHALT
FUEL OIL
LUBRICATING OILS
CYLINDER
ENGINE
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Gibson's Point, Pa.
Port Tampa, Fla.
Port Arthur, Texas

Bayonne, N. J.
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Magazine Point (Mobile), Ala.

Galveston, Texas
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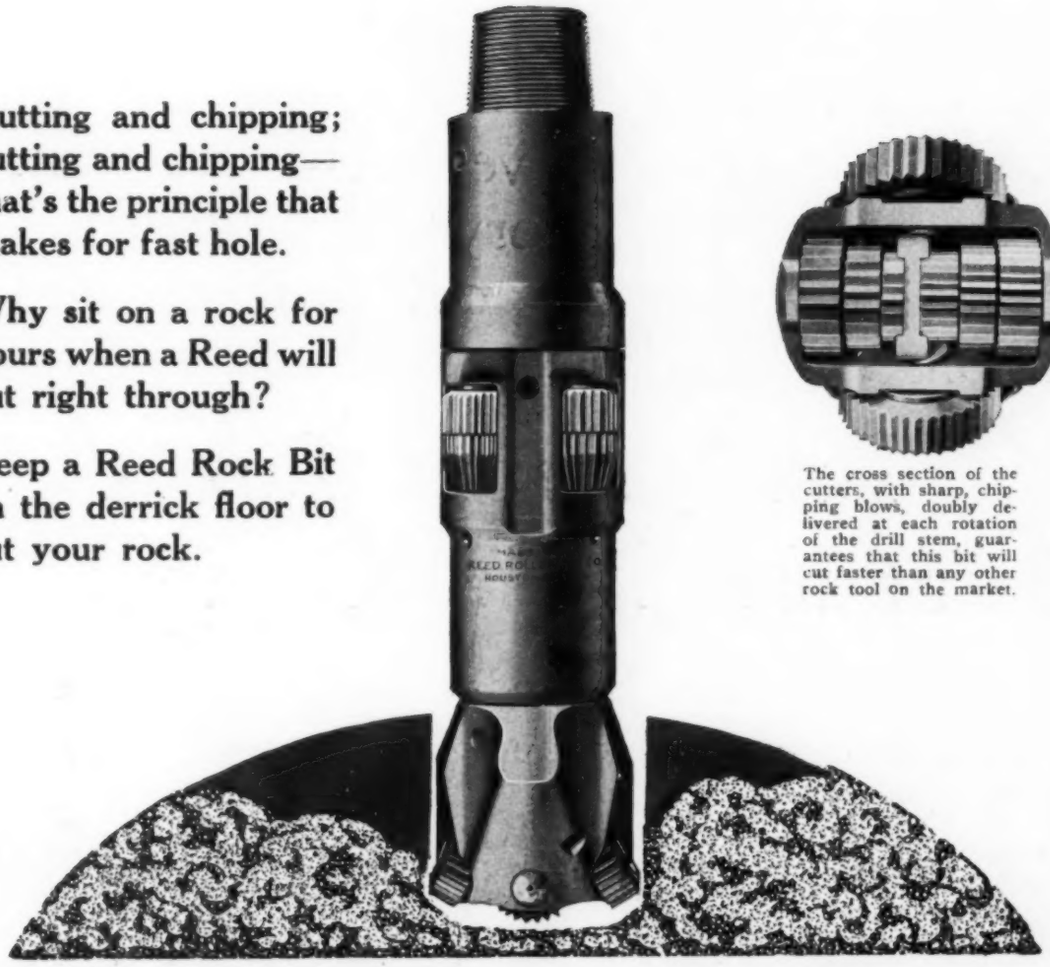

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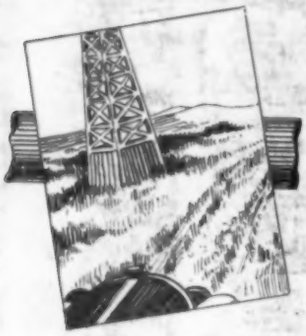
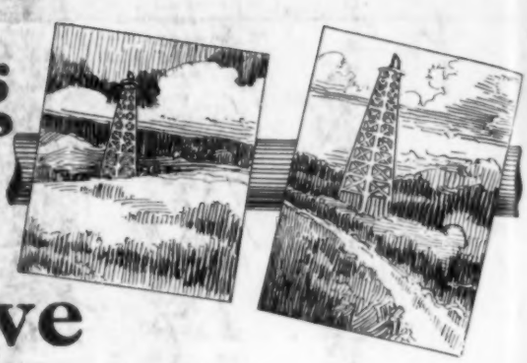
Reed Rock Bits

Reed Roller Bit Company

HOUSTON LOS ANGELES



At the Beginning of an Era of Extensive Wildcatting



The consumption of gasoline increasing, the production of big pools falling off, the price of crude advancing, there is beginning probably the most extensive and widespread era of wildcatting the petroleum world has ever seen—not only over wide stretches of territory but to depths heretofore unknown, bringing new problems and complications for the driller.

Bridgeport Tools Meet the New Conditions

These field-proven tools for today's needs are for sale or rent, along other proven tools and supplies, at the stores of the company.

THE BRIDGEPORT MACHINE COMPANY

General Offices & Works WICHITA, KANSAS